

A REVISION OF THE PENTATOMIDAE (HEMIPTERA—HETEROPTERA) OF THE
RHYNCHOCORIS GROUP FROM AUSTRALIA AND ADJACENT AREAS

PART I. THE GENERA FROM *OCIRRHOE* THROUGH *CUSPICONA* TO *PETALASPIS*
WITH DESCRIPTIONS OF NEW SPECIES AND SELECTION OF LECTOTYPES

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ABSTRACT

GROSS, G. F. 1975. A revision of the Pentatomidae (Hemiptera-Heteroptera) of the Rhynchoris group from Australia and adjacent areas. Part I. The genera from *Ocirrhoe* through *Cuspicona* to *Petalaspis* with descriptions of new species and selection of lectotypes. *Rec. S. Aust. Mus.* 17 (6): 51-167.

The history of the recognition and a definition is given of the *Rhynchoris* group of pentatomid genera. A first section of five genera, two of them new, are described, or revised and redescribed. Thirty-eight species of these genera from the Australian, New Guinea and neighbouring Pacific islands, 22 of them new, are described, or redescribed, and figured. Two other species formerly thought to occur in this area are shown to occur only outside of it, each is briefly redescribed but not figured.

INTRODUCTION

The group relationships of the Pentatomidae are in such an unsatisfactory condition that recognition of formal super-generic categories seems undesirable.

In Gross (1975, and in press) where this problem is considered in greater detail it is proposed that the term "group" be applied to clusters of allied genera, each such group being named after the oldest or most typical genus included therein.

The *Rhynchoris* group of genera of Pentatomidae was first recognised by Stål in 1870 (p. 636) under the name "division Rhynchorina" in these words: "Genera *Rhynchoris*, *Hoffmanseggiella*, *Morna*, *Pugione*, *Pegala*, *Vitellus*, *Cuspicona*, *Ocirrhoe* et *Periboea* divisionem (*Rhynchorina*) formant, quae mesosterno alte carinato, carina anteriori inter vel ante pedes anticos in laminam producta, metasterno elevato, postice emarginato, basi ventris spina, in emarginatura metasterni quiescente, armata, marginibus scutelli apice vel apicem versus nec elevatis, saepissime etiam tibiis teretibus, sulco destitutis, marginique postico thoracis laevi est insignis¹".

The group as such was referred to again by Atkinson in 1888 (p. 147) and then by Distant in 1902 (p. 221) as the Rhynchoraria. Distant's concept of the group was somewhat wider than Stål's or Atkinson's as some of the genera he included (*Sabaeus*, *Amblycara*) lacked strongly raised, laminate keels on the meso- and metasterna.

My concept of the *Rhynchoris* group of genera is substantially the same as Stål's and Atkinson's but includes some additional genera (e.g. *Petalaspis*, *Biprorulus* etc.) described after both ceased to be active in the field and some new genera described in this first part or to be described in the second part.

The group in the Australian region make up one of the biggest and easily characterised subgroupings of Pentatomidae along with the *Halys* group which, in certain features such as the development in some genera of spinously produced juga and the development in a number of genera of spinously produced (or acute) lateral angles to the pronotum, they resemble. However these similarities appear to have arisen convergently for the two groups do not appear to be closely related on other features of the external morphology or of the rigid or sclerotised portions of the male and female genitalia.

Members of the *Rhynchoris* group as understood here have the following attributes:— medium to large size; juga reaching to apex of anteclypeus, slightly beyond, or produced spinously anteriorad; anterolateral angles or pronotum entire, not serrate; lateral angles of pronotum obtuse or convex, or with posterior part of anterolateral margins forming an acute angle or produced into a spinous process; on mesosternum a raised laminate keel which projects forward over prosternum; on metasternum a similar keel with apex adpressed to the base of the mesosternal keel, or the area of contact difficult to see, its base expanded and excavated or notched; on abdomen arising from second and part of third ventrite an elevated area

directed as a spinous process anteriorly whose apex fits into the notch on the metasternal keel; orifices of metathoracic scent glands followed dorsally by a long, usually curved, vertically directed streak or keel; colour in life usually some shade of green fading to yellowish, yellowish-brown, or brownish when preserved as pinned specimens, other colours frequently present are black, brown, luteous and a bright carmine red, these latter colours not usually fading after capture; outline of posterior margin of pygophore not usually complicated by marked projections or processes; claspers strongly F-shaped, the upper ramus longer than median bulge, frequently inclined upwards a little to appear oblique, median bulge usually blunt or convex and dorsally forming a flattened or convex pilose platform (Figs. 6 C, 8 E, 15 E, 25 A, 25 C-D, 25 F etc.); aedeagus with phallosoma honey-coloured and semi-transparent (in most of the species of other groups of Pentatomidae the phallosoma is more heavily sclerotised and blackish, dark brown or brown in colour, in several sets of dissections one specimen, presumably teneral, had a honey-coloured phallosoma whereas others of that same species had the darker phallosoma, in species of the *Rhynchochoris* group the phallosoma was always honey-coloured), conjunctiva membranous and either single lobed and projecting somewhat anteriorly, or bifid, sometimes right from base, in other cases only towards apex, laterally on conjunctiva on each side a flattish ear- or tongue-like process, here called the "lappet" processes, which are usually a little darker than the rest of the conjunctiva, medial penial plates parallel and directed ventrally, frequently in the form of an inverted Y with very blunt arms as viewed

laterally, in other cases hatchet-shaped, vesica and gonopore located in front of the medial penial lobes and directed downwards at about 45° (Figs. 15 C, 25 B, 25 E, 40 A, 46 A, 50 A-C etc.); female external genitalia generally unremarkable; spermathecae only of *Ocirrhoe lutescens* Distant (Fig. 1 A) and of *Cuspicona simplex* Walker (Fig. 1 B) examined, these of usual pentatomid form with a median hollow sclerotised rod through which the sperm-carrying duct runs, processes (diverticula) of the apical spermathecal bulb much longer than those seen in most other pentatomid genera investigated, a single sclerite at entrance of spermathecal duct into genital chamber.

The relationships of this group of genera to other groups within the Pentatomidae are not clear. On external features the group would appear to be related to genera which have a forwardly directed spine arising from the basal abdominal ventrites e.g. *Piezodorus*, *Catacanthus*, *Aspideurus*, *Menida* etc. or those with a conical tubercle or a convex swelling on the basal abdominal segments e.g. *Glaucias*, *Amblyhelus*, *Plautia*, *Alciphron* etc. Some of the latter group are also green though this green does not fade in collections. The structure of the aedeagus and claspers in these various genera does not indicate any particularly close relationship between any of them and genera of the *Rhynchochoris* group though there is general relationship amongst many of them.

A relationship between the *Rhynchochoris* group and the Tessaratomidae equally cannot be discounted as some of the latter group have forwardly directed processes developed from the basal visible segments of the abdomen or

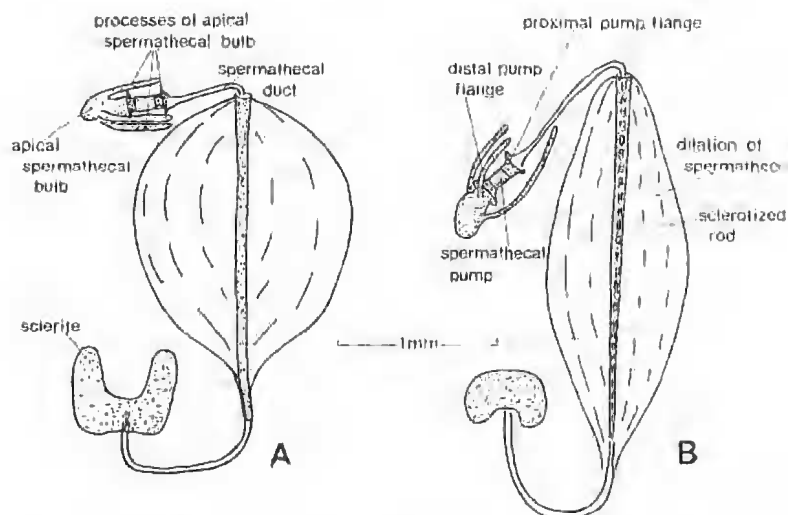


Fig. 1. Spermathecae A. *Ocirrhoe lutescens* Distant, *Cuspicona simplex* Walker.

mesosternal and metasternal keels but again the structure of the aedeagi and claspers do not support any close relationship.

In the descriptions which follow the cited measurements in the table dimensions are in eyepiece divisions where 1 division = 0.052 mm. If these measurements are converted to millimetres using the above relationship more significant figures appear in the millimetre figure than are justified and the subsequent biometric analysis is frequently inaccurate. Therefore to convert approximately to millimetres divide the number of eyepiece divisions by 20. The head length is measured from the apex of the anteclypeus (or if the juga surpasses the anteclypeus from an imaginary line joining the apices of the juga) to the visible base of the head on the middle of the anterior margin of the pronotum. This measurement is more variable than for some of the other measurements because of differences caused by varying degrees of exertion of the head. The head width is measured from the outer margin of one eye to the outer margin of the other. For both head measurements the animal was placed so that the head was horizontal. The measurements of the antennal segments need no explanation save that the first segment is in the vicinity of 8-10 eyepiece divisions and hence is being measured with too coarse a scale and shows a high variability because of this. For the remaining measurements the dorsal surfaces of the abdomen, scutellum and hind portion of the pronotum were placed horizontally, hence the two longitudinal measurements are foreshortened in comparison to those which would occur if measurements were made following the longitudinal curve of the body. The pronotal width is taken from one humeral outer margin to the other, if the lateral angles are spinously produced then the measurement is from the tip of one spine across to the tip of the other. The pronotal length is measured from the anterior margin to the posterior margin along the midline. The total length is measured from the apex of the anteclypeus or if the juga surpass it then from their apices to the apex of the membrane along the midline. The total length is also cited converted to millimetres but without assuming any more significant figures than prudent.

The nomenclature of the male and female genitalia follows Gross 1972, p. 131 *et seq.* and much of it is indicated on at least one illustration of each sex on those figures which show their structure.

The abbreviations of the institutions in which type material and material examined is lodged are as follows:

AM	The Australian Museum, Sydney.
AMNH	The American Museum of Natural History, New York.
ANIC	The Australian National Insect Collection, C.S.I.R.O., Canberra.
ASHLOCK	Peter Ashlock Collection, presently in the University of Kansas, Lawrence.
BISHOP	The Bernice P. Bishop Museum, Honolulu.
BM	The British Museum (Natural History), London.
BRUSSELS	Institut Royal de Sciences Naturelles, Brussels.
CAS	The California Academy of Sciences, San Francisco.
HELSINKI	Universitetets Zoologiske Museum, Helsingfors.
HOPE	The Hope Collection, University Museum, Oxford.
KU	University of Kansas, Lawrence.
LEIDEN	The Rijksmuseum van Natuurlijke Historie, Leiden.
NM	The National Museum of Victoria, Melbourne.
QM	The Queensland Museum, Brisbane.
SAM	The South Australian Museum, Adelaide.
SLATER	J. A. Slater Collection, presently in the University of Connecticut, Storrs.
STOCKHOLM	The Naturhistoriska Riksmuseum, Stockholm.
UQ	Department of Entomology, University of Queensland, Brisbane.
USNM	The Smithsonian Institution, The United States National Museum, Washington.
WAM	The Western Australian Museum, Perth.

In the second part of this paper several new genera will be established for some species now placed in *Cuspicona*, such species as do not appear in this first part have not been missed through an oversight but are to be treated as members of new or different genera in the second part.

In drawing up a key for inclusion in this first part it was necessary to avoid all mention of the new genera to be erected in the second part lest their primary descriptions became based on a key or be mentioned without a type. Hence it was necessary to construct an abbreviated key which will serve to distinguish the genera considered in this part from each other, and in a general way from genera to be considered in the later paper. I apologise for this, but I see no

other satisfactory solution. A full key to all the genera of the *Rhynchocoris* group from this region will appear in the second part.

Key to part of *Rhynchocoris* group of genera found in the Australian, New Guinea and Pacific Regions

- 1. (1) Jugs produced in front on the anteclypeus or at least level with it
genera not covered in this first part
 Juga not produced in front of anteclypeus but obliquely or roundedly sloping back from it 2
- 2. (1) Apex of scutellum acute with apically a rather quadrate membranous plate around and beneath apex and into which apex is produced, this plate reaching behind true apex of scutellum 3
 Apex of scutellum acute or more rounded but without an affixed membranous plate like process 4
- 3. (2) Lateral angles pronotum produced into a prominent outwardly directed reddish or blackish tipped spine
Fitellus Stål (not covered in this part)
 Lateral angles of pronotum acute, not produced into laterally directed spines
Petalaspis Bergroth
- 4. (2) Anterior margin of pronotum not mostly levigate but punctate regularly in two or more series and rest of pronotum mostly finely punctate 5
 Pronotum with anterior margin smooth or never more than two rows of large punctations (except *Pegala virens*) and scattered large punctations on disc
genera not covered in this first part
- 5. (4) Tibiae flattened or sulcate almost their whole length. Scutellum with a very distinct black impression in each basal angle; some black punctations on dorsal surface, including head *Ocirrhoe* Stål (part)
 Tibiae not sulcate, flattened only apically or not at all. Impressions in the basal angles of the scutellum concolorous, black or absent 6
- 6. (5) Proportionately long and slender, head relatively long, thoracic angles unarmed
Diaphya Bergroth
 (= *Paraboea* Jensen-Haarup)
 (not covered in this first part)
 Body ovate or obovate, head medium sized, lateral angles of pronotum sometimes produced into spines, sometimes not 7
- 7. (6) Apical angles of seventh abdominal segment strongly produced or conspicuously angulate 8
 Apical angles of seventh abdominal segment not strongly produced 9

- 8. (7) Lateral angles of pronotum rounded
Parocirrhoe gen. nov.
 Lateral angles of pronotum acute or produced into a long spine
genera not covered in this first part
- 9. (7) Anterolateral margins of pronotum angulately concavely incised at about half their length
Everardia gen. nov.
 Anterolateral margins of pronotum straight or gently convex in front of lateral angles 10
- 10. (9) Mesosternal keel close to prosternum and reaching about base of head 11
 Mesosternal keel not so adpressed to prosternum and reaching forward under base of head
Avicenna Distant (part)
 (not covered in this first part)
- 11. (10) Tibiae flattened towards apices; foveae in basal angles of scutellum present and black or concolorous; lateral margins of pronotum narrowly reflexed or rarely broadly explanate, this reflexion or explanation continued onto truncate lateral angles for a short distance, antennae relatively robust
Ocirrhoe Stål (part)
 Not as above; lateral angles frequently acute or produced into a spinous process. If (*privata* Walker) tibiae flattened towards apices, foveae in basal angles of scutellum present and concolorous and lateral margins of pronotum narrowly reflexed then this reflexion continued around the lateral angles and the antennae slender
Cuspicona Dallas

Ocirrhoe Stål, 1867

Ocirrhoe Stål, 1867, p. 521, 1870, p. 637; 1876, pp. 62 & 102. Lethierry & Severin, 1893, p. 180,

Rhynchocoris Westwood 1837 (in part) p. 29.

Cuspicona Dallas, 1851 (in part) p. 296; Stål, 1867 (in part) p. 521; Lethierry & Severin, 1893 (in part) p. 180. Kirkaldy, 1909 (in part) p. xxxi.

Type species: Cuspicona inconspicua Stål, 1867, non Dallas, 1851 = *Rhynchocoris australis* Westwood, 1837 OD.

Description:

General appearance: Species greenish or brownish-green in life, in museum collections brown or yellowish brown. Strongly punctate above. Small to moderate sized, rather oval. Anterolateral margins of pronotum reflexed or explanate, nearly straight and diverging posteriorly with lateral angles obtusely rounded or truncate, the reflexion of the anterolateral margin

continued partly onto the lateral angle. Head and anterior portion of pronotum inclined at an angle of 30° to rest of body. Tibiae only gently flattened near apices or strongly flattened, even slightly sulcate, on their outer surfaces.

Head: Appearing elongate or not, in most species rather quadrate, wider across eyes than long. Disc flattened anteriorly and rather raised posteriorly; lateral margins usually straight and diverging posteriorly but sometimes concave and in *australis* (Westwood) also reflexed. Apex rounded, rarely rather acuminate, apices of jugs and anteclypeus at about same level. Eyes rather triangular and touching anterior margin of pronotum, ocelli not very conspicuous and placed nearer to inner margin of eyes than to centre line of head, on level of, or behind level of, hind margins of eyes. Antennifers short, antennae five-segmented, first segment thicker than second and third, fourth and fifth generally thicker than second and third, antennae not very long.

Pronotum: At least twice as wide across lateral angles as long, anterior margin truncate or concave behind eyes, then excavate behind collum, anterior angles in the form of a small vertical keel or a spine, frequently reflexed. Antero-lateral margins straight, slightly convex or slightly concave, diverging posteriorly, marginate, these margins rather reflexed or explanate and continuing into region of lateral angles. Lateral angles obtusely rounded or truncate. Postero-lateral margins concave, sometimes angulately so. Posterior angles obtuse or formed into a small spine (*australis*), posterior margin only slightly concave. Disc behind lateral angles in same plane as hind body, before level of lateral angles inclined downwards at about 30°.

Scutellum: Triangular, anteriorly gently raised or not, lateral margins somewhat concave medially, apex broadly rounded. Frena extending about half to two-thirds of length from base to apex.

Hemelytra: Coriaceous parts normally thickened. Corium with exterior margin concave basally or not, then broadly concave to acute or shortly rounded apex. Posterior margin straight, inner angle broadly rounded. Clavus narrow and strongly triangular. Membrane infuscated and hyaline with veins substantially parallel apically.

Abdomen: Gently convex above, excavate apically in males and faintly so in females.

Laterotergites: Three to seven armed with a short acute spine on lateral posterior angle (except in *dallasi*).

Underside: Head obtusely triangular in lateral view. Bucculae lobulately produced anteriorly then sinuate or straight, reaching to about middle of eyes, deeply sulcate between bucculae. Rostrum robust and four segmented, first segment robust and generally reaching to at least base of bucculae, second segment frequently arched. Meso- and metasternum with a robust keel projecting over part of whole of prosternum, latter broadly sulcate under this keel. Legs normal but tarsi always flattened near apices and sometimes strongly flattened and even sulcate their whole length. Abdominal venter faintly V- or U-shaped in cross section as viewed from behind, third segment medially raised into a short triangular tubercle directed anteriorly, its apex fitting into a notch in the metasternal keel. Seventh ventrite in males shallowly excavated posteriorly and deeply excised in females. Pygophore with lateral portions of posterior ventral margin roundedly or angulately produced or not with margin medially truncate or with a U- or V-shaped excavation. Aedeagus with phallosoma lightly sclerotized, conjunctiva produced forward as a more or less single process with or without sclerotized rods, ventrally a pair of ventrally directed parallel, usually bilobed, medial penial plates. Clasper strongly F-shaped. Female genitalia flat, in some species gonocoxae raised along their interior margins.

General remarks: Species placed in this genus have rather a uniform appearance, they can be confused with *Parocirrhoe* but in that genus the posterior angles of the seventh laterotergites are strongly and angulately produced.

The shape of the posterior ventral margin of the male pygophore differs from species to species but is constant in each species and is a good character to help distinguish species. The F-shaped claspers are probably also distinctive for each species but as only those of several species have been dissected out so far this has not been confirmed. The aedeagus of the male also differs quite considerably from species to species of the few investigated. In those species investigated the "lappet" processes of the *Rhynchocoris* group were present and two of the three species investigated had bilobed medial penial plates.

The female genitalia are not very distinctive but the shape of the hind margin of the gonocoxae and whether the gonocoxae are raised along the midline where they meet are good characters to distinguish closely related species.

The genus breaks up into three distinctive groups of species as does *Cuspicona*. The first group of species are suboval with tibiae strongly flattened their whole length; the anterior or posterior tibiae may even be rather sulcate. The second group has the tibiae only flattened distally but are still suboval. One species of this second group, *prasinata* Stål, is very similar to *Cuspicona privata* Walker in appearance and may bridge the gap between the two genera. Under the description of *C. privata* it will be noted that there the tibiae are more flattened than in the other species of *Cuspicona*. *Prasinata* and its allies seem best placed in *Ocirrhoe* on the feature of the reflexed lateral margin of the pronotum continuing onto the region of the lateral angle and the strongly transverse posterior margins of the hind gonocoxae; these are characteristics of some other species of the second group of *Ocirrhoe* species but not of the *thoracica* group of *Cuspicona* where *privata* is best located. The third group contains only the single species *virescens* Westwood which is rather more elongate in appearance than other *Ocirrhoe* species, has a longer head in relation to its width across the eyes than other species of *Ocirrhoe* and has the posterior margins of the first gonocoxae of the female arcuately convex across their whole width, a feature not seen in any other *Ocirrhoe* species. In this group too the tibiae are only flattened distally. Despite the elongate head there does not seem to be close relationship between *Ocirrhoe virescens* and the long headed *Cuspiconas* of the *intacta* group. The dorsal punctation is relatively sparse in *virescens* whereas it is very strongly developed in the *intacta* group of *Cuspicona*.

The three groups of *Ocirrhoe* may later prove to be of subgeneric or even generic rank but such action should await a thorough examination of the aedeagus and claspers of the males of most, if not all, species.

Stål's genus *Ocirrhoe* is supposed to be based on *Cuspicona inconspicua* Dallas, 1851 as it is the only species mentioned under the key couplet No. 156 (157) (1867, p. 521) which forms the description of *Ocirrhoe*. However in the couplet he mentions "Angulis posticis thoracis dente acuto armatis; . . . tibiis superne sulcatis; . . ." which are character states only of *Ocirrhoe australis* (Westwood, 1837) in the genus as I understand it. In 1870 (p. 51) Stål gives a second description, again only in the form of a key couplet—No. 2 (3) which repeats most of the features of the 1867 couplet, including the two character states mentioned above, but does not list any included species.

Finally in 1876 in the key couplet 188 (189) (p. 67) which forms his third and last diagnosis of the genus he mentions again the sulcate tibiae, adds that the foveae in the basal angles of the scutellum are black and that the dorsal surface of the body has some black punctations, and notes that the posterior angles of the pronotum may be obtuse or produced into a tooth. This definition could now only refer to *australis* (Westwood) and to two new species, *wilsoni* mihi and *westwoodi* mihi, of those I include in this genus. Clearly at this stage Stål recognises at least two of these three species, both in my first *australis* group, as belonging to the genus. On p. 102 of the same publication he lists two species under the genus heading, *O. unimaculata* (Westwood) and *O. australis* (Westwood); he does not give either a generic description of *Ocirrhoe* in this citation or specific descriptions of the two included species; he does not mention *inconspicua* as an included species and he does not mention any specimens examined of the two species he does include. *O. unimaculata* was also obviously misidentified for true *unimaculata* has to be excluded as it does not have sulcate tibiae, black punctations on the body or black foveae in the basal angles of the scutellum. There are six specimens in Stockholm which could have been concerned with Stål's conception of the genus. Five of them stood above the label *unimaculata* (Westwood), one of them is labelled on the pin "Ocirrhoe inconspicua Dall 1 ex unimaculatae Hope Westw. aff", all five are actually *australis* (Westwood). The sixth specimen stood above the label *australis* (Westwood) but it is an example of my new species *westwoodi*. Therefore it is clear that Stål used one of the series of *australis*, probably the one with the label on the pin (though Dr. Per Inge Persson informs the handwriting is not that of Stål), which he had first misidentified as *inconspicua* and then as *unimaculata*, in the construction of the first diagnosis of *Ocirrhoe*. He expanded the diagnosis upon recognising the second species which he took to be *australis* but which is again not that species but *westwoodi* mihi.

Therefore I have altered the previously cited fixation of *Cuspicona inconspicua* Dallas as the type of this genus to *Cuspicona inconspicua* Stål, 1867 non Dallas, 1851 (= *Rhynchoecoris australis* Westwood, 1837). Original designation. Application will be made to the International Commission to have this type fixation validated.

Key to *Ocirrhoe* species

1. (1) Head coarsely punctate with black; a black point in each basal angle of scutellum;

- tibiae strongly flattened or even vaguely sulcate almost their whole length 2
- Head not punctate with black; with or without a black point in each basal angle of scutellum; first two pairs of legs with tibiae only flattened apically, hind tibiae flattened their whole length or not 4
2. (1) Dark brown; head densely punctate with black and appearing much darker than pronotum; third segment of antennae apically infuscated; posterolateral angles of pronotum acutely triangular produced
australis (Westwood)
- Yellowish or greenish brown; head more sparsely and more regularly punctate, usually not appearing darker than pronotum; first three segments of antennae completely pale or if third apically infuscated punctation even on head, pronotum and scutellum; posterolateral angles of pronotum obtuse or rounded 3
3. (2) Anterolateral margins of pronotum rather laminaately expanded and vaguely reflexed; a black spot at bases of pro-, meso- and metepisterna; fourth and fifth antennal segments frequently strongly infuscated except at their bases; pronotum coarsely punctate with black (male) or narrowly black punctate just inferiorly of anterolateral margins; hind margin of male pygophore gently concave medially and gently convex laterally . . . *wilsoni* sp. nov.
- Anterolateral margins of pronotum obtusely marginate, the actual margin raised; no black spots at bases of episterna; all antennal segments pale or at most only lightly infuscated; pronotal punctations usually sparse and brown but if black punctations present then only anteriorly behind collum; hind margin of male pygophore strongly transversely truncate with a small medial concavity *westwoodi* sp. nov.
4. (1) Last two segments of antennae strongly infuscated (except at their bases and apices) 5
- Last two segments of antennae not infuscated, or only fifth infuscated (except at base and apex) 6
5. (4) Scutellum with a conspicuous black or brown spot in each basal angle; hind margin of male pygophore medially strongly concavely excavate and laterally broadly convexly rounded, this hind margin frequently reddish; hind margins of female gonocoxae faintly sinuated, transverse, gonocoxae not raised along their inner (longitudinal contiguous) margins . . . *dallasi* sp. nov. (part)
- Scutellum without a conspicuous black or brown spot in each basal angle; hind margin of male pygophore medially strongly V-shaped excavated and laterally produced posteriorly into a strong somewhat angulate lobe on each side; hind margins of female gonocoxae strongly transversely truncate except medially where they turn anteriorly, gonocoxae strongly raised medially along their inner (longitudinal contiguous) margins
lutescens Distant
6. (4) Fifth segment of antennae broadly infuscated with black or dark brown, only extreme base and apex of this segment pale; hind margin of male pygophore laterally lobulately produced and medially with a small tooth on the margin of either side of the midline *coronata* sp. nov.
- Fifth segment of antennae not infuscated; hind margin of pygophore without a small tooth on either side of midline 7
7. (6) Scutellum with a conspicuous black or brown spot in each basal angle 8
- Scutellum without a conspicuous black spot in each basal angle 10
8. (7) Under 7.5 mm long; hind third of pronotum transversely reddish or pinkish; with a triangular patch of brown punctations on either side of scutellum just in front of pale apical area *cavenda* sp. nov.
- Over 7.5 mm long; hind third of pronotum concolorous; scutellum uniformly punctate with brown except at pale apex 9
9. (8) Antennae robust, four terminal segments reddish, third segment as long as or longer than second; base of head not black
inconspicua (Dallas)
- Antennae robust or not, four terminal segments reddish or pale; third segment shorter than second; extreme base of head black
dallasi sp. nov. (part)
10. (7) Pronotum without a pale transverse band posteriorly; pygophore of male with hind margin laterally produced posteriorly as a rather hooked lobulate process on each side; hind margin of female gonocoxae strongly transverse *prasinata* (Stål)
- Pronotum with a pinkish or yellowish transverse band or bar posteriorly, in faded specimens still visible as a paler area; male pygophore not as above; hind margins of gonocoxae transverse or not 11
11. (10) Scutellum laterally yellowish or pale, this yellowish or pale running into apical pale area; if lateral areas of scutellum concolorous then apex of scutellum also not conspicuously lightened. Hind margin of male pygophore rather triangularly produced on either side, medially rather V-shaped incised; hind margins of female gonocoxae strongly roundedly or angulately convex *virescens* (Westwood)
- Scutellum laterally concolorous, apical area generally pale. Hind margin of male pygophore almost truncate, so also hind margins of gonocoxae . . . *unimaculata* (Westwood)

Australis Group

This group contains three species collectively occurring in the moister regions of South Australia east of Saint Vincent Gulf, Victoria, Tasmania, New South Wales and southern Queensland. The group characteristics are:—rather obovate (pronotum width: total length about 9 : 16); rostrum not reaching much past hind coxae; all tibiae clearly flattened for most of their length on their exterior surfaces, usually also one or more pairs distinctly sulcate for most of their length on the flattened area; hind margins of female gonocoxae transverse or produced into a rounded lobe interiorly; head and usually also pronotum marked with black punctations; apical segments of antennae usually infuscated; foveae in basal angles of scutellum black.

Ocirrhoe australis (Westwood, 1837)

Figs. 2, 4 A-B

Rhynchocoris australis Westwood, 1837, p. 30.

Ocirrhoe australis Stål, 1876, p. 102. Lethierry & Severin, 1893, p. 180.

Cuspicona australis Walker, 1867, p. 387.

Rhaphigaster viridipes Walker, 1867, p. 370.
New synonymy.

Cuspicona inconspicua Stål, 1867 (*non* Dallas, 1851), p. 521. Misidentification.

Cuspicona uninotata Walker 1868, p. 571,
New synonymy.

Description:

General appearance: Museum specimens yellowish-brown or reddish-brown with coarse black and brown punctations and brown and black infuscated areas. Apex of scutellum and most of underside bright yellow. Eyes and ocelli purplish. Foveae in basal angles of scutellum black. Three apical antennal segments infuscated in part.

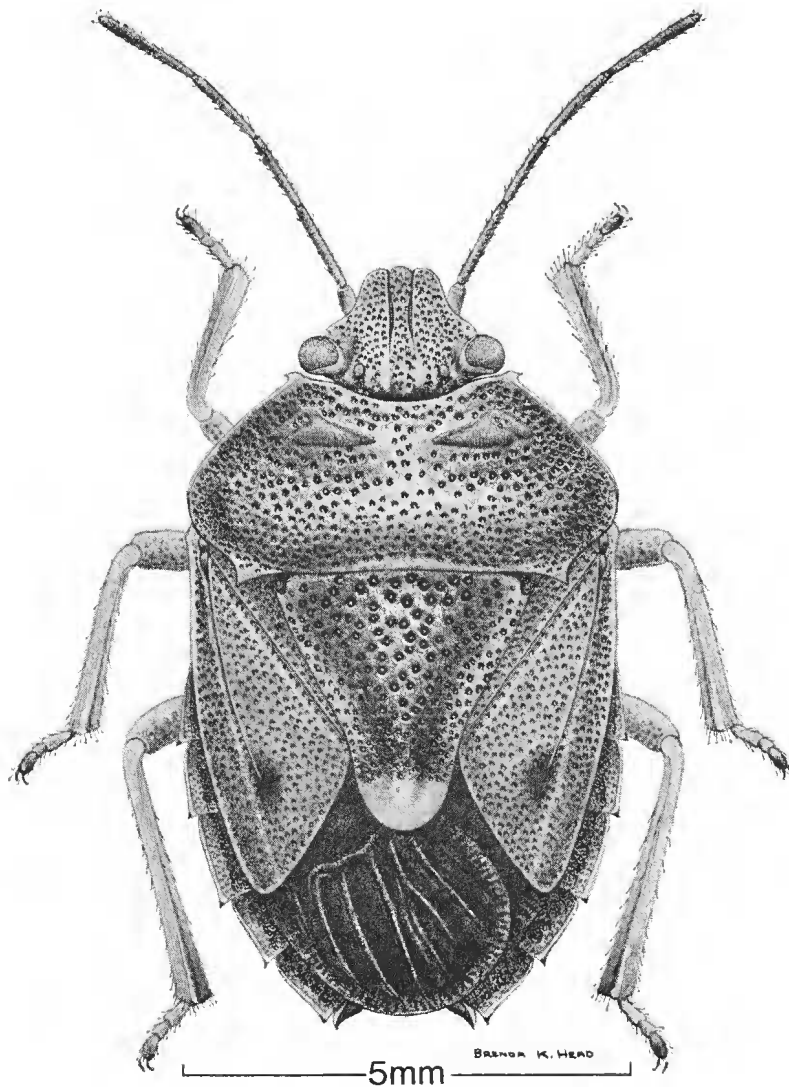


Fig. 2. Dorsal aspect of *Ocirrhoe australis* (Westwood).

Head: Appearing rather broad and apically rather broadly rounded. Concolorous with dense coarse black punctations and base of collum also black. Eyes and ocelli purplish. Anteriorly flattened with lateral margins of juga shallowly reflexed, posteriorly only a very little raised. Anteclypeus hardly surpassing apices of juga, lateral margins distinctly concave.

Pronotum: Concolorous with coarse brown punctations, latter exteriorly sometimes black, not reaching lateral margins. A black or brown spot just interiorly of each lateral angle. Calli glabrous, sometimes with a transverse black bar. Anterior margin oblique behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a small recurved tooth. Anterolateral margins slightly convex, thickened laterally and narrowly reflexed. Lateral angles behind reflexed margin truncate, posterolateral margins at first convex then concave, posterolateral angles produced as a small, acute, triangular lobe. Posterior margin slightly concave.

Scutellum: Concolorous only laterally, basally medially and preapically suffused with chocolate brown; apex broadly bright yellow and impunctate. Rest of disc with coarse brown or black punctations. A black fovea in each basal angle inward of which on each side is a callous pale point. Raised somewhat in anterior half and flattened in posterior half. Sometimes a trace of a broad longitudinal callous line present in posterior half. Lateral margins gently convex in basal half then straight, short and gently converging to broadly rounded apex. Frena reaching about 7/13 of length.

Hemelytra: Coriaceous parts concolorous or somewhat browner than ground colour; basal half of exterior margin of corium and a callous patch near apex of medial fracture yellowish, behind the latter a black patch; elsewhere coarsely punctate with brown. Exterior margin of corium elongately concave basally then almost straight to subacute apical angle, reaching about middle of abdominal segment VI, laterotergites broadly exposed. Posterior margin of corium straight, inner angle very broadly rounded.

Clavus comparatively short and elongately triangular. Membrane and veins brownish hyaline.

Abdomen: Together with dorsum of pygophore black.

Laterotergites: Exteriorly yellowish or reddish interiorly black or reddish, densely punctate, posterior exterior angles produced into moderately strong minutely black tipped spines.

Underside: Bright yellow, punctate on propleuron, except along lateral margin, on mesopleuron in front of evaporative areas, on metapleuron behind evaporative areas and laterally on abdomen, punctations sometimes concolorous, sometimes brown and occasionally black. Antennal segments I and II, the basal 2/3 of III; the base of IV and the base and apex of V yellow, the apical 1/3 of II the apical 3/4 of IV and a medial band on V dark brown or blackish. Rostrum ventrally and its apex black. A black spot at base of pro-, meso- and metepipleura, sometimes abdominal segments IV-VII with a medial black spot basally. Legs completely yellowish.

Bucculae low and strongly sinuated, reaching about middle of an eye, anteriorly produced into a rounded lobe. Rostral segment I robust, reaching to base of bucculae, II compressed and arched, surpassing fore coxae, III to base of mid coxae and IV just onto abdomen. Ratio of antennal segments (δ) 10 : 19 : 15 : 23 : 27. Metasternal-mesosternal keels about the same height their whole length, not reaching apex of prosternum, anteriorly rounded, hardly deflected to left in ventral view. Legs normal without long pilosity, only the normal short pilosity on tibiae and tarsi; fore tibiae strongly flattened their whole length or even sulcate, middle and hind tibiae sulcate. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 4 A, hind margin of pygophore transverse and vaguely sinuated, broadly reflexed. Apex of female abdomen Fig. 4 B, hind margin of first gonocoxae exteriorly transverse and interiorly produced posteriorly as a lobulate process, inner margins very shortly raised; posterior margins of VIIIth laterotergites angulately produced.

Dimensions—

MALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	8	40	1.0	2.5	39-42
Head width	8	44	1.3	3.0	42-46
Antennal segment I	13	10	0.8	7.4	9-12
Antennal segment II	10	21	1.4	6.9	19-23
Antennal segment III	9	15	0.9	5.9	14-16
Antennal segment IV	5	23	0.7	3.1	22-24
Antennal segment V	3	27	—	—	26-28
Pronotum width	7	97	5.4	5.6	90-107
Pronotum length	8	40	2.6	6.5	36-42
Total length	8	180	12.4	6.9	164-200

FEMALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	17	39	3.5	9.0	32-42
Head width	17	46	2.6	5.8	40-48
Antennal segment I	30	10	0.9	8.9	9-11
Antennal segment II	28	19	1.3	7.0	17-22
Antennal segment III	27	15	1.2	7.9	12-16
Antennal segment IV	23	21	2.2	10.3	16-25
Antennal segment V	18	26	2.3	8.9	20-29
Pronotum width	17	105	9.4	8.9	87-116
Pronotum length	17	43	3.1	7.2	37-47
Total length	16	191	25.9	13.6	155-215

Total length: 8.1-11.2 mm

Remarks: *Ocirrhoe australis* is the darkest coloured of all the species in this genus and is easily recognised in mixed series on this feature alone. It is one of only three species that have black punctations on the head and has the unique feature of the posterolateral angles of the pronotum being produced into acute triangular processes. *Ocirrhoe australis* has a quite restricted distribution, occurring only in Queensland from just north of Brisbane, in eastern New South Wales, and northern Victoria to Trawool. One specimen in Stockholm is supposed to have come from Fiji, if so it is the first record of an *Ocirrhoe* species occurring outside of Australia if we accept that *Cuspicona privata* Walker is not an *Ocirrhoe*.

The description of *Rhaphigaster viridipes* Walker and *Cuspicona uninotata* Walker are such that they can only apply to *Ocirrhoe australis*.

Location of types:

Type ♂ of *Rhynchocoris australis* Westwood, "New Holland," in HOPE, types of *Rhaphigaster viridipes* Walker, "Queensland", and *Cuspicona uninotata* Walker, "Australia", cited as originally in NM but not now to be found there (A. Neboiss *in litt.*).

Specimens examined: The type of *australis* Westwood and Queensland 1 ♂, Mt. Beerwah via Glasshouse Mountains, 550 m (1 800ft.),

5.XII.1965, T. Weir UQ; 1 ♂, Brisbane, 12.IX.1911, H. Hacker; 1 ♀, Caloundra, 28.X.1913, H. Hacker; 1 ♂, Tambourine Mountain, H. Hacker QM; 1 ♀, Gumdale near Brisbane, 30.VI.1968, at fluorescent light, J. K. Guyomar ANIC; 1 ♂ Brisbane, 12.IX.1911, H. Hacker SAM; 1 ♀, Brisbane, 12.IX.1911, H. Hacker; 1 ♀, Tambourine Mountains, 11-18.IV.1935, R. E. Turner BM; 1 ♂, 1 ♀, Brisbane, 12.IX.1911, H. Hacker KU. New South Wales 1 ♂, 3 ♀, Mt. Tomah, 28-29.II.1932, in rotting grass-tree, J. Armstrong; 1 ♂, Comboyne, 10.XI.1932, K. M. McKeown AM; 3 km (2 miles) S.S.W. of Nambucca Heads, 18.X.1956, P. B. Carne ANIC; 1 ♀, French's Forest near Sydney, 21.X.1948, E. B. Britton; 2 ♀, National Park, 31.X.1948, E. B. Britton BM; 1 ♂, Gosford, 1904, W. W. Froggatt KU; 2 ♀, Sydney, Nov. 1902, *ex* Helms collection; 1 ♀, National Park, Dec. 1905, *ex* Helms collection BISHOP. Australian Capital Territory, 1 ♀, Jervis Bay, 18.IX.1951, T. G. Campbell ANIC. Victoria 2 ♀, Trawool, 17.XII.1919, *ex* J. E. Dixon collection NM. Unlocalised Australian 2 ♂, 1 ♀, Australia, Winnerz (the female is the specimen bearing the additional label mentioned on p. 56 and is believed to be the specimen, or one of the specimens, on which the genus *Ocirrhoe* was diagnosed); 1 ♀, Austral. bor., Thorey STOCKHOLM. Fiji 1 ♀, Ins. Fidschi, Dämel STOCKHOLM.

***Ocirrhoe wilsoni* sp. nov.**

Figs. 3, 4 C-D

Description:

General appearance: Museum specimens yellowish with coarse black and brown punctations, some brownish markings on scutellum. Apex of scutellum and most of underside bright yellow. Eyes and ocelli purplish. Foveae in basal angles of scutellum black. Two apical antennal segments black except at base.

Head: Appearing rather broad and apically rounded. Concolorous with dense coarse black punctations and base of collum also black. Eyes and ocelli purplish. Anteriorly flattened with lateral margins of juga broadly reflexed, posteriorly only a very little raised. Anteclypeus just surpassing apices of juga, lateral margins distinctly concave.

Pronotum: Concolorous; punctations on males and females differently coloured; in males blackish brown on all parts of pronotum and conspicuous, in females brown or concolorous on disc but laterally just inside anterolateral margins punctations intense black. Hind portion

of pronotum behind level of lateral angles frequently faintly darker than rest of disc. Calli glabrous. Anterior margin oblique behind eyes and semicircularly excavate behind collum, anterolateral angles represented by a small recurved tooth. Anterolateral margins nearly straight and laminate, broadly reflexed. Lateral angles behind reflexed margin very short, posterolateral margins sinuate turning smoothly into faintly concave posterior margin, posterolateral angles therefore not produced.

Scutellum: Concolorous with blackish-brown punctations, on basal margin a brown spot on either side of middle and preapically a brown triangular patch on either side, not meeting in middle. Apex yellow and impunctate, this yellow produced a little forward medially between the subapical brown patches, in front of this a trace of a raised longitudinal line extending forward to base. A conspicuous black fovea in each basal angle. Raised somewhat in anterior half and flattened in apical half. Lateral margins gently convex in basal half then straight and converging to broadly rounded apex. Frena reaching about 7/12 of length.

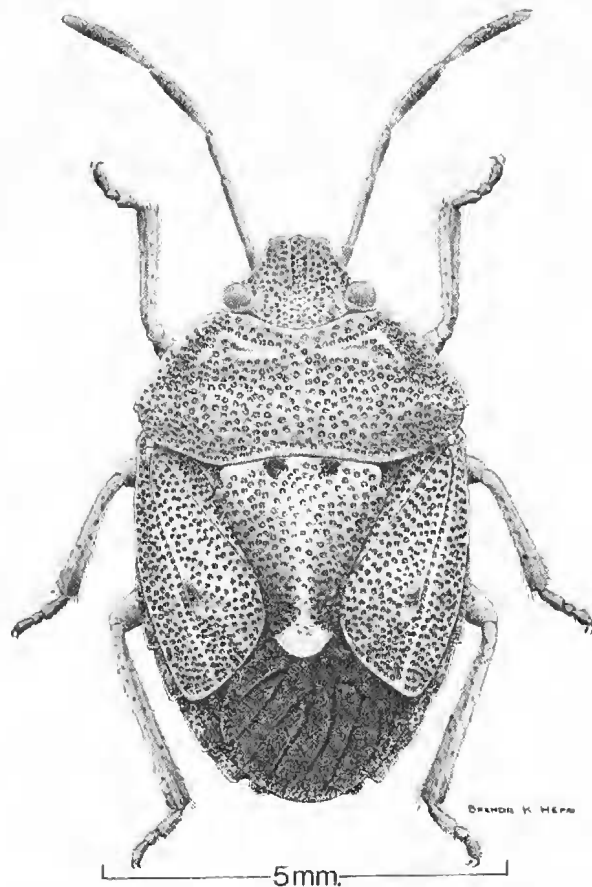


Fig. 3. Dorsal aspect of *Ocirrhoe wilsoni* sp. nov.

Hemelytra: Coriaceous parts concolorous with fine blackish-brown punctations, a callous patch near apex of medial fracture and a small brown patch on interior angle of corium. Exterior margin of corium faintly concave and depressed basally then broadly curved to subacute apical angle, reaching just beyond base of abdominal segment VI, laterotergites broadly exposed. Posterior margin of corium straight, inner angle very broadly rounded. Clavus elongately triangular. Membrane and veins faintly brownish hyaline.

Abdomen: Probably concolorous.

Laterotergites: Concolorous with black patches of punctations exteriorly in front of and behind each incisure. Posterior exterior angles almost rectangular.

Underside: Bright yellowish with brown and black punctations on propleuron, anteriorly on mesopleuron, posteriorly on metapleuron, on femora and tibiae and laterally on abdomen in males, in females these punctations except on femora usually concolorous. Antennal segments I-III concolorous, IV and V black except basally and in V sometimes apically also. Rostrum ventrally and its apex black. A black spot at

bases of all episterna, and in males medially at the bases of abdominal ventrites IV-VII, spiracles also black.

Bucculae low and sinuated, reaching to about middle of eye, anteriorly produced into a sub-triangular lobe. Rostral segment I robust and reaching to about base of bucculae, II compressed and arched, surpassing fore coxae, III reaching to about middle of mid coxae and IV just onto base of abdomen. Ratio of antennal segments (δ) 8 : 18 : 11 : 19 : 22. Metasternal-mesosternal keels about same height their whole length, not reaching apex of prosternum, anteriorly rounded, hardly deflected to left in ventral view. Legs normal without long pilosity, only the normal short pilosity on tibiae and tarsi and a few short hairs on femora. Tibiae strongly flattened almost their whole length hind tibiae rather sulcate. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 4 C, hind margin of pygophore shallowly excavate. Apex of female abdomen Fig. 4 D, hind margin of first gonocoxae slightly convex and interiorly produced as a short lobulate process, inner margins shortly raised; posterior margins of VIIIth laterotergites subangulately produced.

Dimensions—

MALES (2 only)

Parameter	Mean	Observed Range
Head length	31	31-2
Head width	37	36-38
Antennal segment I	8	8-9
Antennal segment II	18	17-19
Antennal segment III	11	11-12
Antennal segment IV	19	19
Antennal segment V	22	22-23
Pronotum width	78	77-79
Pronotum length	34	34
Total length	137	135-140

FEMALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	5	35	0.8	2.4	34-36
Head width	5	39	0.9	2.3	38-40
Antennal segment I	10	8	0.5	5.9	7-9
Antennal segment II	10	17	0.8	4.8	16-18
Antennal segment III	10	11	0.4	3.9	10-11
Antennal segment IV	9	17	1.1	6.2	16-19
Antennal segment V	9	21	1.3	6.3	19-23
Pronotum width	5	87	1.7	1.9	86-90
Pronotum length	5	37	1.3	3.5	36-39
Total length	5	155	6.1	3.9	149-161

Total length: 7.0-8.4 mm

Remarks: *Ocirrhoe wilsoni* is apparently closely related to *australis* as they have in common a black punctate head, dark prepical markings on the scutellum and a lobulate

projection inwardly on the hind margins of the first gonocoxae. It lacks the triangular projection of the posterolateral angles of the pronotum of *australis* and is generally paler.

The species is found only in the wetter parts of south eastern Australia, occurring in the four states New South Wales, Victoria, Tasmania and South Australia.

Location of types:

Holotype ♂, allotype ♀, 1 paratype ♂, Grampians, Victoria, Oct. 1928, F. E. Wilson; 1 paratype ♀, Cockatoo, Victoria, G. F. Hill in NM; 1 paratype ♀, Jervis Bay, Australian Capital Territory, 18.IX.1951, T. G. Campbell; 1 paratype ♀, Rupert Point, 5 km (7 miles) north of Pieman River, Tasmania, 30.XII.1953, T. G. Campbell in ANIC; 1 paratype ♀ (Reg. No. 120,726), Tapanappa near Cape Jervis, South Australia, 5-9.XII.1949, G. F. Gross & N. B. Tindale in SAM.

Specimens examined: The types only.

***Ocirrhoe westwoodi* sp. nov.**

Figs. 4 E-F, 5, 6 A-C.

Ocirrhoe unimaculata Stål, 1876 (*non* Westwood, 1837), p. 102, misidentification

Description:

General appearance: Grass green in life with brown and black punctations and brown infuscated areas. Underside paler, apex of scutellum luteous or yellow. Eyes and ocelli purplish. Foveae in basal angles of scutellum black. Antennae yellowish brown, two apical segments infuscated in part. Museum specimens with green colour changed to yellowish, other colours as noted.

Head: Appearing not very broad and narrowing apically, actual apex rounded. Concolorous

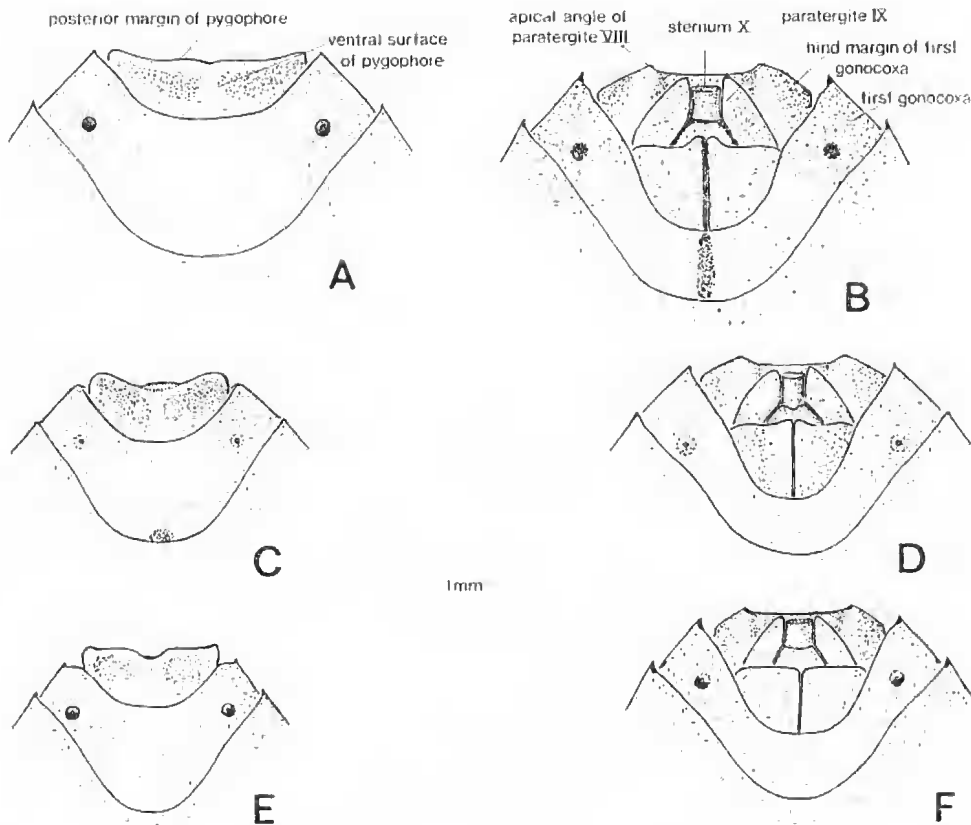


Fig. 4. *Ocirrhoe australis* (Westwood), *Ocirrhoe wilsoni* sp. nov., *Ocirrhoe westwoodi* sp. nov. A-B. *Ocirrhoe australis*. A, ventral aspect of male abdomen. B, ventral aspect of female abdomen. C-D. *Ocirrhoe wilsoni*. C, ventral aspect of male abdomen. D, ventral aspect of female abdomen. E-F. *Ocirrhoe westwoodi*. E, ventral aspect of male abdomen. F, ventral aspect of female abdomen.

with discrete black and some brown punctations, base of collum black. Anteriorly flattened with lateral margins of jugs shallowly reflexed, posteriorly only a very little raised. Anteclypeus hardly surpassing apices of jugs, lateral margins distinctly concave.

Pronotum: Concolorous with coarse and scattered black, brown and concolorous punctations, posterior 3/7 infuscated with brown and punctations in this region darker. Calli glabrous. Anterior margin oblique behind eyes and concavely excavate behind collum, anterolateral

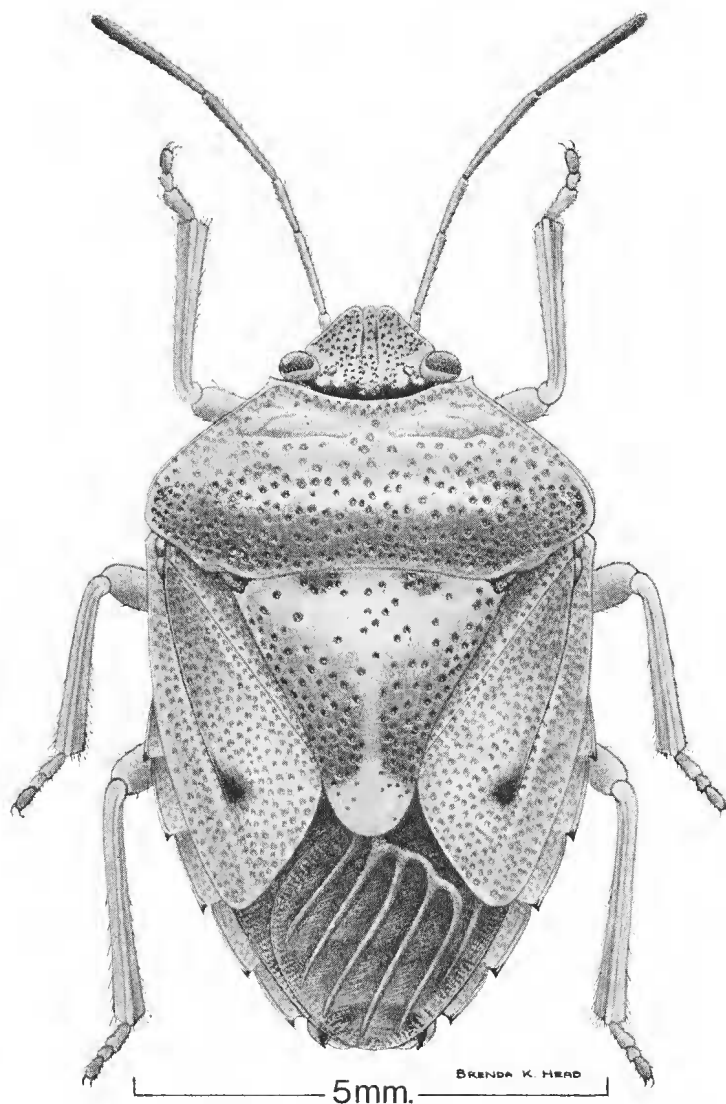


Fig. 5. Dorsal aspect of *Ocirrhoe westwoodi* sp. nov.

angles represented by a very small tooth. Anterolateral margins nearly straight, laterally thickened and very slightly raised. Lateral angles behind reflexed margin very short, posterolateral margins slightly concave and rounding onto slightly concave posterior margin.

Scutellum: Concolorous with a few coarse brown punctations except apically and pre-apically, pre-apically on either side a small triangular brown patch, apex luteous or yellow and nearly impunctate, this yellow or luteous extending forward between the brown patches and then faintly visible as a median paler line extending to base. A black fovea in each basal angle. Raised somewhat in anterior half and flattened in basal half and then straight and gently converging to broadly rounded apex. Frena reaching about 2/3 of length.

Hemelytra: Coriaceous parts concolorous with coarse punctations, latter brown or blackish brown interiorly and concolorous exteriorly; apex of medial fracture of corium with a brown spot, around this glabrous. Exterior margin of corium concave and depressed basally then almost straight to nearly rectangular apical angle, reaching to just past base of abdominal segment VI, laterotergites narrowly exposed. Posterior margin of corium faintly convex, inner angle very broadly rounded. Clavus comparatively long and elongately triangular. Membrane and veins hyaline.

Abdomen: Exteriorly concolorous, behind scutellum with large quadrate black patches, parts of dorsal surface of pygophore black.

Laterotergites: Concolorous with concolorous punctations, posterior exterior angles produced into strong black tipped spines.

Underside: Paler than above, in museum specimens bright yellow, punctate on bucculae, near base of head below, on propleuron except along lateral margin, on mesopleuron in front of evaporative areas, on metapleuron behind evaporative areas and laterally on abdomen, punctations concolorous. Antennal segments yellowish brown, apical pair somewhat darker, the former except at base, the latter except at base and apex. Rostrum ventrally and its apex black. A minute black spot on mesopleuron anteriorly midway between mesepisternum and exterior margin; spiracles and posterior angles of the ventrites black. Legs mostly yellowish.

Bucculae low and strongly sinuated, reaching about middle of an eye, anteriorly produced into a triangular lobe. Rostral segment I robust, reaching base of bucculae, II compressed and reaching about middle of fore coxae, III to about middle of mid coxae and IV to just past middle of hind coxae. Ratio of antennal segments (δ) 9 : 16 : 12 : 20 : 23. Metasternal-mesosternal keels about the same height for most of their length, apically obliquely descending and then shortly rounded, not reaching apex of prosternum, not deflected to left apically in ventral view. Legs normal without long pilosity, only the normal short pilosity on tibiae and tarsi, fore

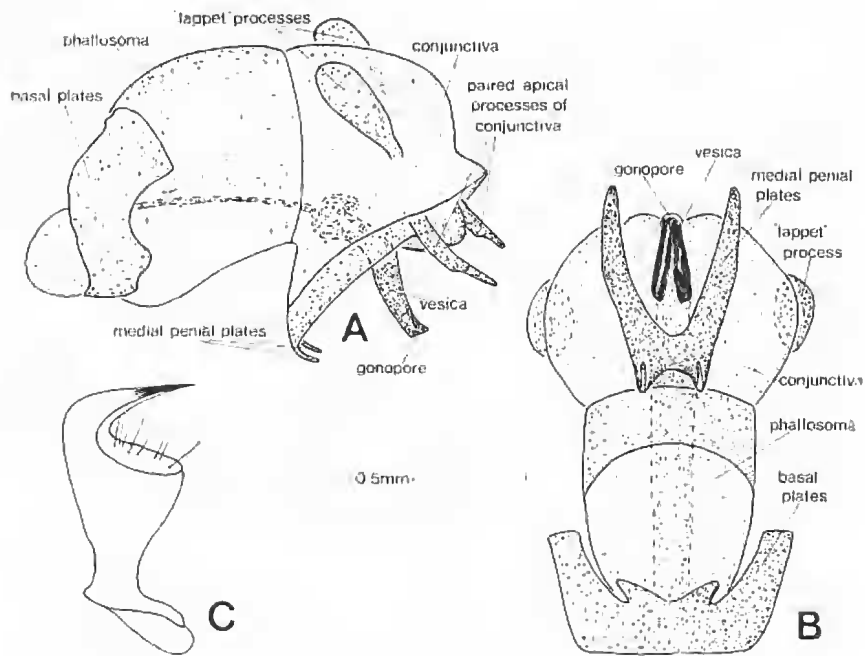


Fig. 6. *Ocirrhoe westwoodi* sp. nov.—aedeagus and clasper. A. left hand side aspect of aedeagus. B. ventral aspect of aedeagus. C. clasper.

tibiae flattened and rather sulcate apically, mid and hind tibiae faintly sulcate almost their whole length. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 4 E, hind margin of pygophore sinuated, shortly semi-circularly excavate medially. Clasper Fig. 6 C, strongly F-shaped, the upper ramus sclerotized towards its tip. Aedeagus Figs. 6 A-B, with phallosoma short and honey-coloured, "lappet" processes rather elongate and directed upwards

and slightly backwards, conjunctiva curved downwards, apically produced into two tubular processes, medial penial plates apparently different in shape to most other members of the *Rhynchocoris* group, vesica prominent and emerging from between the medial penial plates. Apex of female abdomen Fig. 4 F, hind margins of first gonocoxae virtually transverse, interior margins not raised, apical angles of VIIIth paratergites angulately produced.

Dimensions—

MALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	15	29	1.5	4.9	27-32
Head width	15	34	1.5	4.4	31-36
Antennal segment I	29	9	0.8	9.2	6-10
Antennal segment II	29	16	1.2	7.5	12-19
Antennal segment III	29	12	0.7	6.3	11-13
Antennal segment IV	20	20	1.6	8.4	16-23
Antennal segment V	15	23	1.8	7.7	21-26
Pronotum width	15	80	3.8	4.7	76-88
Pronotum length	15	31	1.7	5.5	29-34
Total length	15	142	7.0	5.0	130-151

FEMALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	19	31	1.6	5.1	28-34
Head width	19	36	1.2	3.3	34-38
Antennal segment I	35	9	0.8	9.1	6-9
Antennal segment II	35	15	1.0	6.1	14-17
Antennal segment III	34	12	0.9	8.1	10-14
Antennal segment IV	27	18	1.0	5.8	16-20
Antennal segment V	25	22	0.9	4.2	20-24
Pronotum width	19	87	4.8	5.5	76-95
Pronotum length	19	34	2.2	6.5	28-39
Total length	19	153	8.7	5.7	130-174

Total length. 6.8-9.1 mm

Remarks: *Ocirrhoe westwoodi* is apparently closely related to *wilsoni*, sharing the black spotted head and similar markings on the pronotum and scutellum. It differs from *wilsoni* in the paler terminal segments of the antennae, in the angulately produced lateral posterior angles of the laterotergites, the hind margin of the pygophore being excavate only medially and the transverse hind margins of the female gonocoxae. The latter feature shows resemblance to the species of the *unimaculata* group. *O. westwoodi* occurs only in the wetter parts of Victoria, New South Wales and Tasmania.

Location of types:

Holotype ♂, Wamberai, Gosford District, N.S.W., 1-3.X.1932, A. Musgrave; 4 paratype ♂, 3 paratype ♀ (Reg. Nos. K63379-80), Marysville, Victoria, 30-31.XII.1930, A. Musgrave; 1 paratype ♂, Fern Tree Gully, Victoria, 27.IX.1919, donated F. P. Spry; 1 paratype ♀, Millgrove, Victoria, Jan. 1927, F. E. Wilson; 1 paratype ♂ (Reg. No. K57813), Eagle Hawk Neck, Tasman Peninsula, Tasmania, 22.I.1928, A. Musgrave; 1 paratype ♂, Kurradjong, New South Wales, Oct. 1933, Dr. K. K. Spence AM; allotype ♀, 1 paratype ♀, Gonyah, Victoria, 12.I.1962, on *Senecio jacobaea* L. (Ragwort), G. Bornemissza; 2 paratype ♀, Fern Tree Gully, Victoria, Oct. 1930, J. Evans; 1 paratype ♀,

Kangaroo Valley, New South Wales, 17.IX.1951, T. G. Campbell ANIC; 1 paratype ♂, Koongalala Point, Lamington National Park, South Queensland, 29.X.1955, T. E. Woodward; 1 paratype ♂, Lamington National Park, 28 Jan.-3 Feb. 1963, G. Montieth; 2 paratype ♀, Mt. William, Grampians Range, 1150 m (1 800ft), Victoria, 2.I.1966, I. B. Cantrell, I. T. Weir UQ; 1 paratype ♂, 1 paratype ♀, Healesville, Victoria, 15.XII.1958, F. E. Wilson NM; 1 paratype ♀, Ringwood (Reg. No. I20,729), 9.XI.1952, F. E. Wilson; 1 paratype ♂, (Reg. No. I20,727), 1 paratype ♀, (Reg. No. I20,733), Pt. Campbell, Victoria, Nov. 1959, G. F. Gross; 1 paratype ♂ (Reg. No. I20,728), between Peterborough and Port Campbell, Victoria, 17.XI.1959, G. F. Gross; 1 paratype ♀ (Reg. No. I20,730), Selby, Dandenong Ranges, Victoria, 20.XI.1959, by sweeping vegetation, G. F. Gross; 1 paratype ♂, 1 paratype ♀ (Reg. Nos. I20,731-2), Belgrave National Park, Victoria, 20.XI.1959, by sweeping vegetation, G. F. Gross SAM; 1 paratype ♂, National Park, New South Wales, 31.X.1948, E. B. Britton BM; 1 paratype ♂, 1 paratype ♀, Gosford, New South Wales, 16.X.1903, W. W. Froggatt KU; 1 ♀, Mt. Wellington, Tasmania, 2-300 m., 23.XII.1960, in *Nothofagus* forest, J. L. Gressitt BISHOP. 1 paratype ♂, New South Wales, Däimel STOCKHOLM.

Specimens examined: the types only.

Unimaculata Group

This group contains a series of seven species collectively occurring over most of Australia with the exception of the northern part of the Northern Territory and the northern half of Western Australia. The group characteristics are:—rather obovate (pronotum width: total length about 5:9); rostrum not reaching much past hind coxae; tibiae flattened only apically though hind tibiae may be more extensively flattened than those of the two anterior pairs of legs; hind margins of female gonocoxae transverse, transversely sinuate or slightly arched; head not marked with black punctations; four apical antennal segments infuscated or not; and foveae in basal angles of scutellum infuscated or concolorous.

This group appears to be intermediate between members of the *australis* and *virescens* groups as some members have some or all of the four apical segment infuscated and/or have black foveae in the basal angles of the scutellum like the members of the *australis* group whereas others have pale antennae and/or concolorous foveae in the basal angles of the scutellum like the *virescens* group. One member (*unimaculata* (Westwood)) has a pale transverse bar on the pronotum and large red maculae laterally on ventrites III-IV of the abdomen like *virescens* (Westwood). Members of this group differ from those of the *australis* group in having the tibiae flattened only apically and not having black punctations on the head. From the *virescens* group they differ in their more oval shape. *Ocirrhoe prasinata* (Stål), a member of this *unimaculata* group closely resembles *Cuspicona privata* Walker and is presumably closely related to it and hence to the *simplex* group of *Cuspicona*.

***Ocirrhoe lutescens* Distant, 1900**

Figs. 1 A, 7, 8 A-E, 9.

Ocirrhoe lutescens Distant, 1900a, p. 422.*Rhaphigaster virescens* Dallas (*non* Westwood) 1851, p. 284.**Description:**

General appearance: Green in life; apex of scutellum yellow, sometimes apical margin narrowly red. Extreme base of head black. Eyes and ocelli purplish. Foveae in basal angles of scutellum concolorous. Apical pair of antennal segments infuscated except at bases and apices. In museum specimens green fading to bright yellow, other colours as noted.

Head: Appearing strongly triangular and apically narrowly rounded; concolorous but narrowly black at extreme base; anteriorly flattened and posteriorly only a very little raised. Anteclypeus not surpassing apices of juga, lateral margins distinctly concave. Disc rugulose punctate.

Pronotum: Concolorous with rather coarse punctations, calli glabrous. Anterior margin oblique and slightly raised behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a small recurved tooth. Anterolateral margins nearly straight, thickened laterally and broadly reflexed. Lateral angles behind reflexed margin truncate, posterolateral margins somewhat concave, posterior margin almost straight.

Scutellum: Concolorous with rather coarse punctations; on anterior half transversely rugulose; apex bright yellow and impunctate, sometimes margined with red apically. A concolorous fovea in each basal angle. Anteriorly a little raised and in posterior half flat. A trace of a longitudinal glabrous line present. Lateral margins gently convex in basal half then straight or gently rounded and converging to rather acute apex. Frena reaching about 4/7 of length.

Hemelytra: Coriaceous parts concolorous with regular moderately dense punctations, a large elongate callous area inward of the apical third of the medial fracture. Exterior margins of coria elongately concave basally then almost straight to shortly rounded apical angle, reaching base of abdominal segment VII, laterotergites broadly exposed. Posterior margin of corium nearly straight, inner angle very broadly rounded. Clavus comparatively short and elongate triangular. Membrane and veins pale brownish hyaline.

Abdomen: Medially piceous, laterally concolorous.

Laterotergites: Concolorous, densely punctate, posterior exterior angles produced into an acute black-tipped spine.

Underside: Concolorous, coarsely punctate, except on exterior margins of head and pronotum, evaporative areas and the appendages. Antennal segment I concolorous, segments II-III reddish brown, IV-V piceous except at extreme bases and apices. Rostrum ventrally and its apex black. Tibiae apically and tarsi brown or reddish brown, rest of tibiae and rostrum more yellowish than rest of underside.

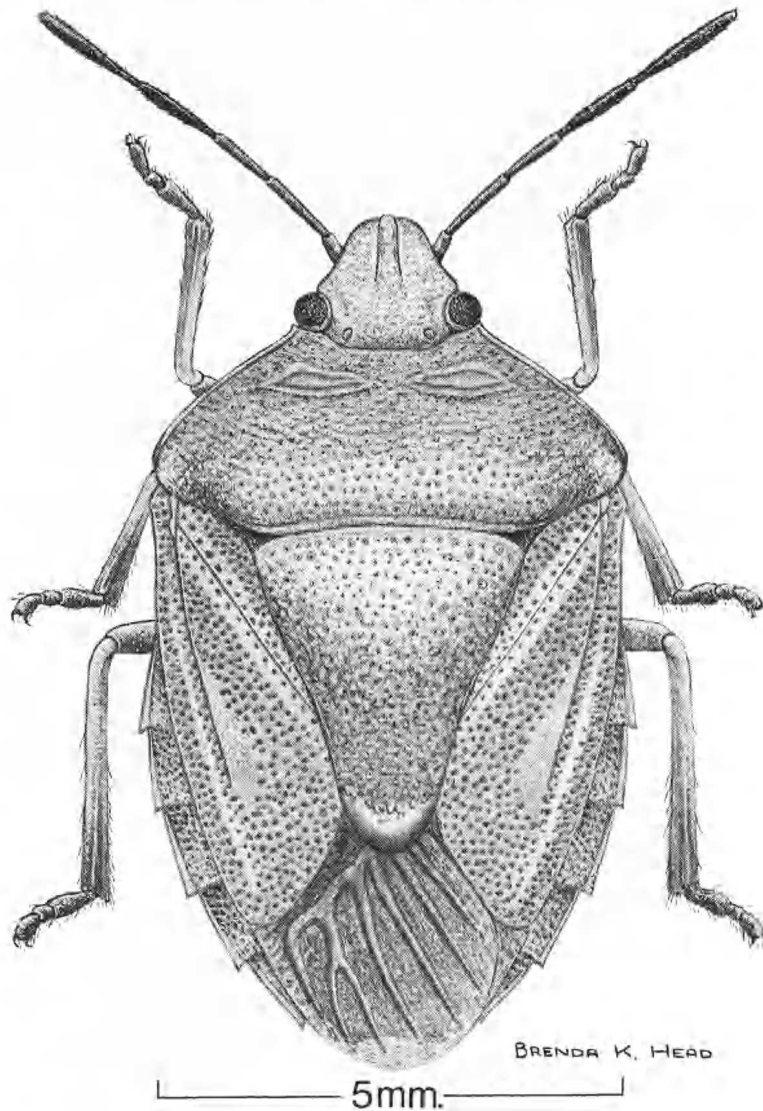


Fig. 7. Dorsal aspect of *Ocirrhoe lutescens* Distant.

Ventral spine and a large area surrounding it on ventrites III and IV brownish yellow, behind this a broad yellow longitudinal line extending back medially to the apex of ventrite VII. Pygophore of male with hind margin frequently reddish.

Bucculae low and sinuated, reaching about middle of an eye, anteriorly produced into a prominent lobe. Rostral segment I robust, reaching nearly to base of bucculae; II compressed and arched, reaching to about middle of fore coxae; III to about middle of hind coxae and IV to about middle of hind coxae. Ratio of antennal segments (δ) 9 : 18 : 14 : 21 : 26. Metasternal-mesosternal keels about the same height their whole length, anteriorly rounded, not deflected to left anteriorly in ventral view. Legs

normal without long pilosity, only the normal short pilosity on tibiae and tarsi. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 8 A, hind margin of pygophore medially strongly triangulately excavate, the margins of this incision rather sinuate, exterior margin somewhat convex giving the pygophore the appearance of a lateral subtriangular lobe on either side. Clasper Fig. 8 E, shaped as an inclined F, the central lobe not strongly produced. Phallosoma Figs. 8 C-D, of medium length and honey-coloured, "lappet" processes well developed, the conjunctiva apparently was not completely inflated but made up of a dorsal lobe on either side of which along its base is a strongly sclerotized rod, these rods converging basally. Medial penial plates not heavily sclerotized and perhaps not fully everted

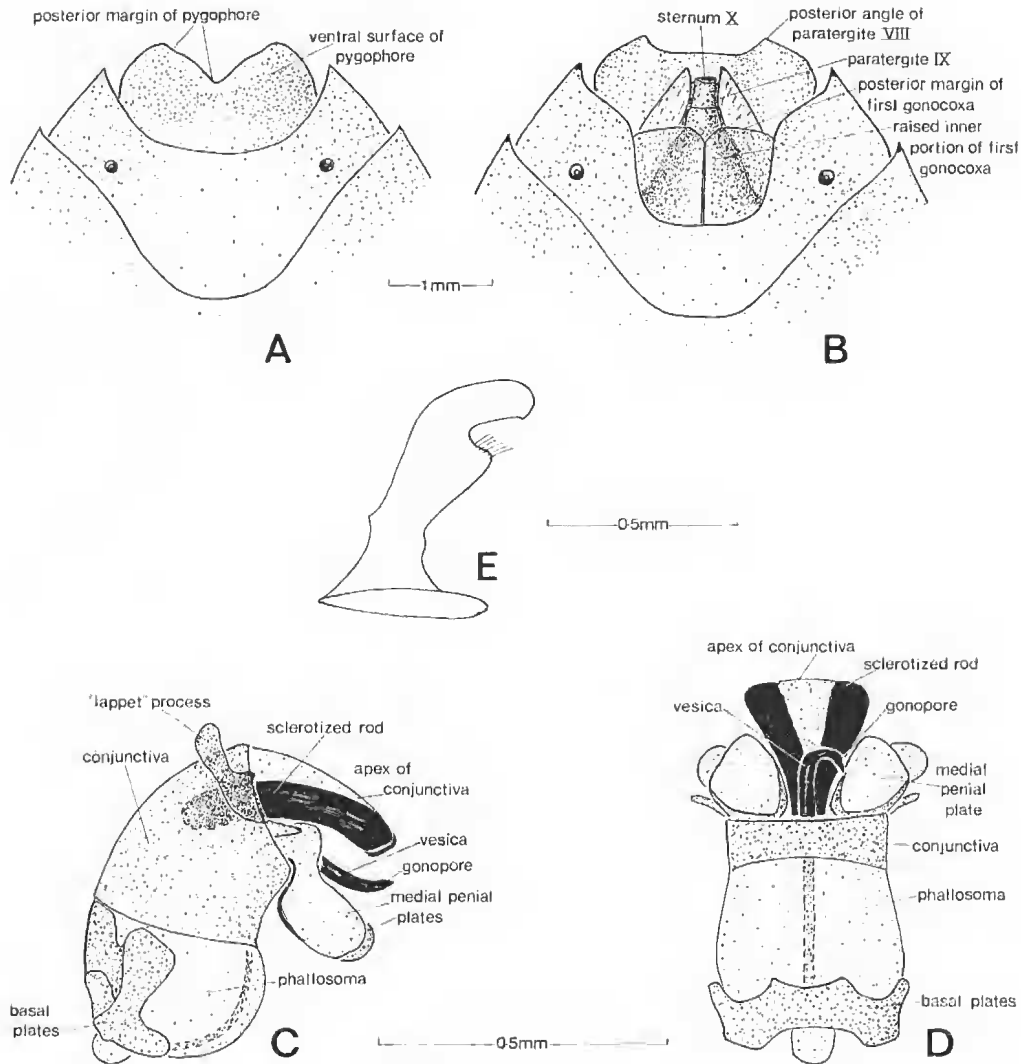


Fig. 8. *Ocirrhoe lutescens* Distant—external genitalia, aedeagus and claspers. A. ventral aspect of male abdomen. B. ventral aspect of female abdomen. C. left-hand side aspect of aedeagus. D. ventral aspect of aedeagus. E. clasper.

in the dissections but sinuated. Apex of female abdomen Fig. 8 B, hind margins of first gonocoxae transverse laterally and directed obliquely forward interiorly, inner half of each gonocoxa

strongly reflexed so that the inner margins of the two gonocoxae are strongly elevated. Posterior margins of VIIIth laterotergites strongly and angulately produced. Spermatheca Fig. 1A.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	25	38	1.3	3.3	35-40
Head width	25	41	1.4	3.5	38-44
Antennal segment I	49	9	0.8	8.6	7-11
Antennal segment II	49	18	1.7	9.3	13-21
Antennal segment III	50	14	1.6	11.1	11-18
Antennal segment IV	41	21	1.0	4.7	20-24
Antennal segment V	37	26	1.2	4.8	24-29
Pronotum width	25	105	5.5	5.3	96-112
Pronotum length	25	43	2.8	6.5	38-47
Total length	25	192	11.6	6.1	168-212

Dimensions—

Parameter	FEMALES				Observed Range
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	
Head length	25	38	1.2	3.1	36-41
Head width	25	41	1.4	3.4	38-44
Antennal segment I	47	10	0.8	8.6	8-11
Antennal segment II	48	18	1.1	5.9	16-20
Antennal segment III	48	14	1.4	10.0	11-17
Antennal segment IV	47	21	1.2	6.1	18-24
Antennal segment V	41	25	1.4	5.5	22-28
Pronotum width	25	106	5.0	4.8	91-112
Pronotum length	25	44	3.0	6.8	38-50
Total length	25	192	11.5	6.0	174-216

Total length: 8.7-11.3 mm

Remarks: *Ocirrhoe lutescens* is easy to recognise in collections as it has most of segments IV and V of the antennal blackish but the foveae in the basal angles pale. It has no black spots on the head. Two other species in this group without black spots on the head, *dallasi* (sometimes)

and *coronata*, may have one or both terminal antennal segments darkened. *Ocirrhoe dallasi* has the foveae in the basal angles of the scutellum infuscated. *Ocirrhoe coronata* has the basal foveae in the scutellum concolorous but has only the terminal antennal segment darkened.

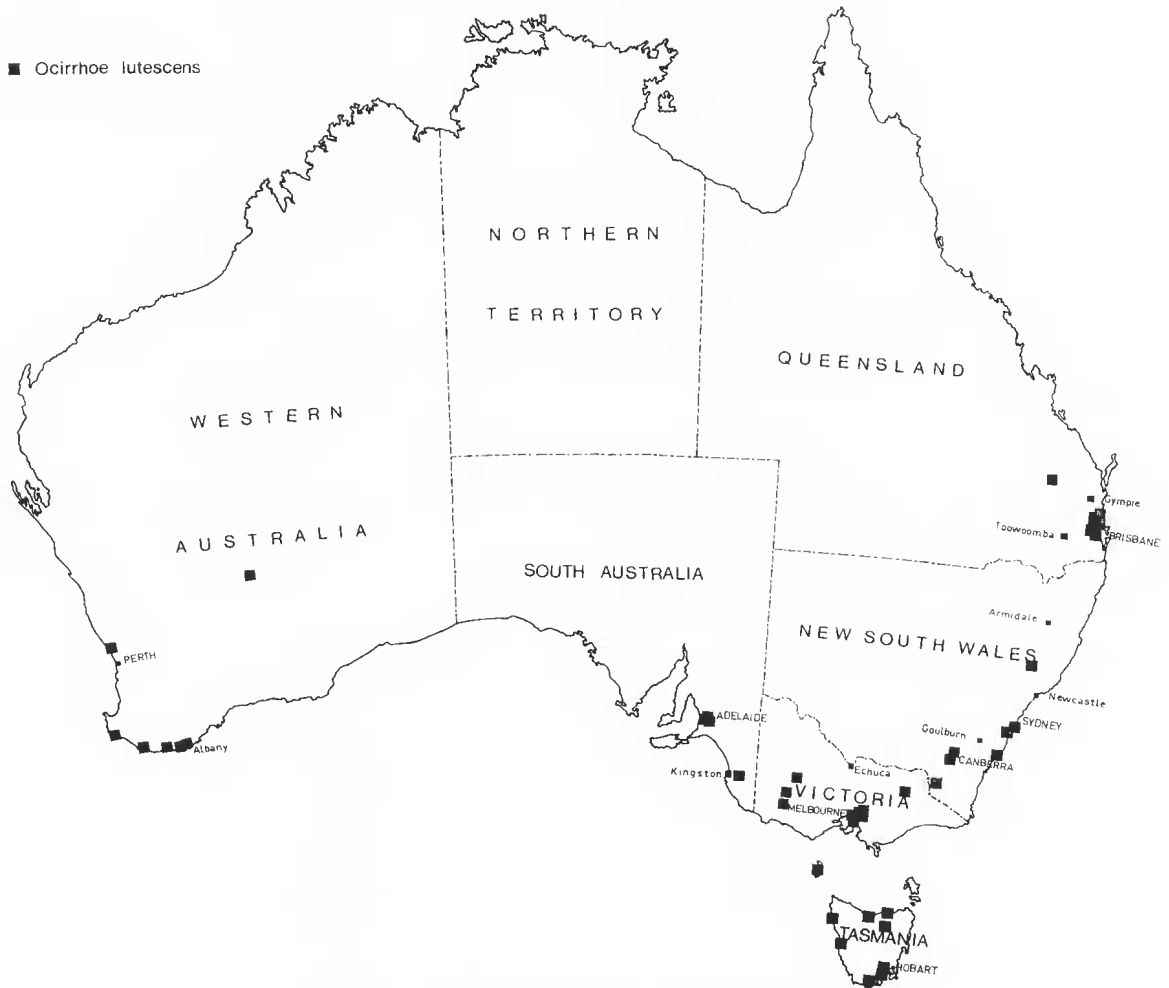


Fig. 9. Distribution of *Ocirrhoe lutescens* Distant.

From both of these species *lutescens* may be distinguished from the strong angulate emargination in the hind margin of the pygophore and the strongly raised inner portion, especially the inner margins, of the female first gonocoxae.

Ocirrhoe lutescens: is distributed in the wetter regions of Australia south of the 25°S line of latitude. The only host plant record is *Leptospermum myrsinoides* Schlecht from Blackwood, South Australia.

Location of type:

Type ♀ of *lutescens* Distant, "King George's Sound, Australia", in BM.

Specimens examined: The type and 68 ♂ and 79 ♀ specimens from 45 localities. Detailed locations for these specimens are not given but are plotted on Fig. 9. The specimens examined came from the following collections (numbers in each collection in parentheses) UQ(24), QM(1), AM(9), ANIC(24), AM(9), NM(21), SAM(28), WAM(1), BM(4), AMNH(8), CAS(12), BISHOP(6).

***Ocirrhoe dallasi* sp. nov.**

Figs. 10, 12 A-B

Cuspicona roei Dallas (*non* Westwood) 1851, p. 297, Distant, 1900 b, p. 815.

Description:

General appearance: Olive green in life with concolorous punctations; first antennal segment yellowish, remaining segments ferruginous, terminal pair frequently infuscated. Eyes and ocelli purplish, very base of head black. Apex of scutellum yellowish or reddish. Museum specimens with green fading to yellow, other colours as noted. Second antennal segment clearly longer than third.

Head: Appearing rather broad and apically broadly rounded; concolorous, black at very base, eyes and ocelli purplish; anteriorly, flattened, posteriorly slightly raised. Anteclypeus hardly surpassing apices of juga, lateral margins of latter gently concave. Disc coarsely and rugulose punctate.

Pronotum: Concolorous with discrete dense punctations, in green specimens the lateral margins yellowish, calli narrow and slightly rugulose. Anterior margin shortly oblique behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a small vertical carina. Anterolateral margins

nearly straight, thickened and reflexed. Lateral angles behind explanate margin truncate, posterolateral margins slightly concave, posterior margin almost straight.

Scutellum: Concolorous with discrete fairly fine punctations, apex yellow, reddish-yellow or reddish and impunctate. Fovea in each basal angle infuscated. Raised slightly in anterior half and flat posteriorly. No trace of median longitudinal line. Lateral margins nearly straight but converging in basal half then fairly convex to broadly rounded apex. Frena reaching a little past half length.

Hemelytra: Coriaceous parts concolorous with regular moderately coarse punctations, in green specimens basal portion of exterior margin of corium yellowish. Medial fracture glabrous towards apex. Exterior margin of corium concave and reflexed basally then nearly straight to shortly rounded apical angle, reaching middle of abdominal segment VI, laterotergites broadly exposed. Posterior margin of corium straight, inner angle very broadly rounded. Clavus elongate triangular. Membrane and veins pale brownish hyaline.

Abdomen: At about the level of the middle of scutellum a broad transverse black bar, under apex of scutellum and behind it large quadrate black spots, sometimes divided. Dorsum of pygophore reddish. Rest concolorous.

Laterotergites: Concolorous, finely though densely punctate, posterior exterior angles almost rectangular, marked with black.

Underside: Paler than above, coarsely punctate except on sides of head, exterior margin of prothorax, evaporative areas, ventrally along abdomen and appendages. First antennal segment yellowish, remainder reddish, fourth and fifth frequently infuscated, the former not at base and the latter neither at base or apex. Rostrum ventrally and its apex black. Tibiae apically and tarsi reddish-brown. Lateral margins of prothorax, epipleuron and abdomen paler, pygophore edged with reddish. Thoracic keels and a broad median stripe on abdomen paler. Spiracles and posterior angles of abdominal ventrites black.

Bucculae low and strongly situated, reaching to about middle of eyes, medially depressed, anteriorly forming a rounded lobe. Rostral segment I robust, not reaching base of bucculae, II compressed and reaching base of fore coxae, III to base of middle coxae and IV to base of abdomen. Antennae not unduly robust, ratio

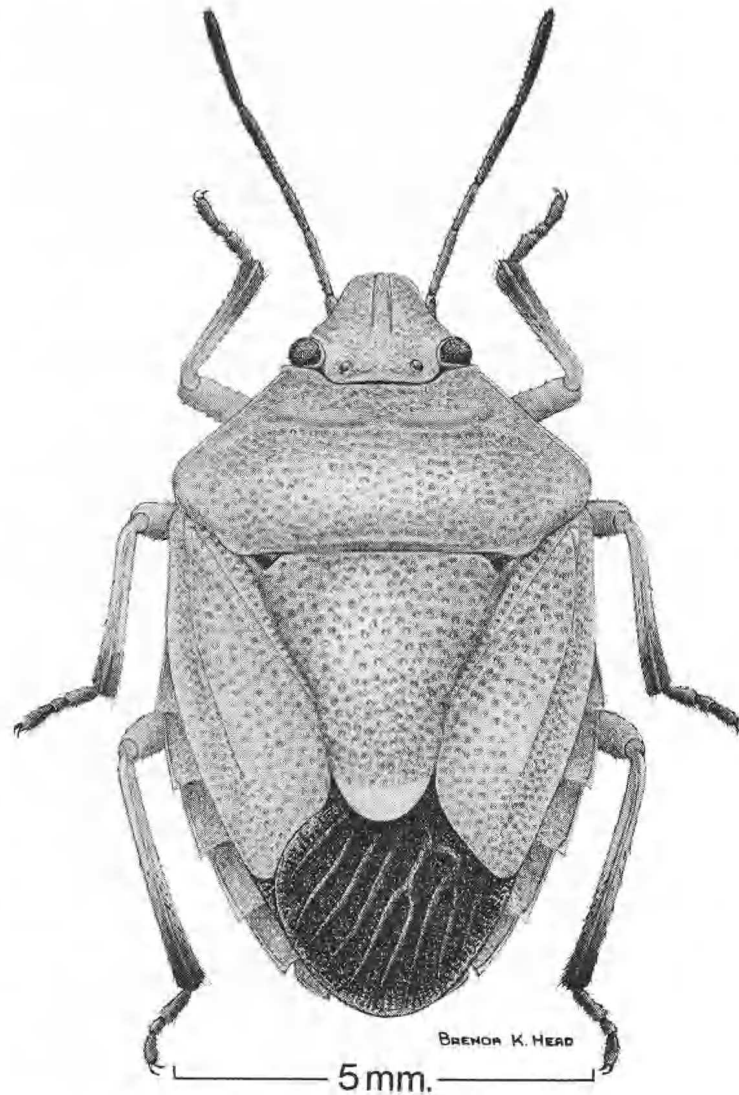


Fig. 10. Dorsal aspect of *Ocirrhoe dallasi* sp. nov.

of segments (δ) 9:17:12:21:24. Metasternal-mesosternal keels of even height to fore coxae, then slightly inclined downwards to apex which is obliquely directed posteriorly dorsally, surpassing apex of prosternum, keels not deflected to left in ventral view. Legs normal without long pilosity, only the usual short pilosity on tibiae and tarsi. Tibiae flattened, at least apically.

Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 12 A, hind margin of pygophore concave medially and convex laterally. Apex of female abdomen Fig. 12 B, hind margins of first gonocoxae transverse, inner margins only faintly elevated; posterior margins of VIIIth laterotergites produced only into a blunt angle.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	21	36	1.6	4.3	33-39
Head width	21	39	1.8	4.4	37-44
Antennal segment I	38	9	0.5	5.5	8-10
Antennal segment II	38	17	1.2	7.3	15-19
Antennal segment III	38	12	1.4	11.4	10-17
Antennal segment IV	32	21	0.9	4.4	19-23
Antennal segment V	20	24	1.1	4.8	22-26
Pronotum width	21	93	7.9	8.5	83-116
Pronotum length	21	38	3.4	8.7	33-47
Total length	21	174	14.6	8.4	155-213

Dimensions—

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	15	38	1.7	4.4	36-42
Head width	15	40	1.9	4.7	38-44
Antennal segment I	26	10	0.6	6.8	9-11
Antennal segment II	28	17	1.3	6.8	15-19
Antennal segment III	28	13	1.6	12.7	11-17
Antennal segment IV	25	21	1.1	5.1	19-22
Antennal segment V	18	24	1.4	5.7	22-26
Pronotum width	15	97	4.7	4.9	91-107
Pronotum length	15	41	3.7	9.0	37-49
Total length	15	182	11.8	6.5	169-205

Total length: 8.1-11.1 mm

Remarks: *Ocirrhoe dallasi* resembles *O. lutescens* in the black base of the head and the tendency of the two terminal segments of the antennae to become infuscated. It differs in having black or fuscous foveae in the basal angles of the scutellum, in the broader apex of the latter, in the apical margin of the male pygophore being convexly excavate not angulately excavate and the inner margins of the first gonocoxae of the female not being strongly elevated.

Ocirrhoe dallasi occurs in southern Queensland, New South Wales, Victoria, South Australia (including Kangaroo Island) and there is one specimen from the Northern Territory, the only example of an *Ocirrhoe* from that state. This species may occur in Western Australia also, a female specimen from Ravensthorpe fits the description in most details whereas another female from Muchea in certain respects is closer to *inconspicua* though it has the short third antennal segment of *dallasi*. The species has been recorded from several species of native plants belonging to the genera *Hakea* and *Grevillea* (Proteaceae), *Exocarpos* (Santalaceae) and *Leptospermum* (Myrtaceae).

Location of types:

Holotype ♂, 1 paratype ♂, Canberra, Australian Capital Territory, Oct. 1929, J. W. Evans; allotype ♀, Black Mountain, Canberra, Australian Capital Territory, 1.XI.1960, on *Exocarpos cupressiformis* Labill, T. G. Campbell; 2 paratype ♂, Black Mountain, Australian Capital Territory, 30.XI.1929, A. Tonnoir; 1 ♂, Black Mountain, Australian Capital Territory, 12.I.1961, I.F.B. Common; 1 paratype ♂, 1 paratype ♀, Black Mountain, Canberra, Australian Capital Territory, 11.X. & 22.XI.1965, ex *Hakea sericea* Schrad, J. M. Walker, AcHa 103; 2 paratype ♂, 1 paratype ♀, Black Mountain, Canberra, Australian Capital Territory, 23.II.1966, ex *Hakea sericea* Schrad, S. Neser, AcHa 103; 4 paratype ♂, Black Mountain, Canberra, Aus-

tralian Capital Territory, 1.III.1967, on *Grevillea lanigera* A. Cunn. ex R.Br. T. G. Campbell; 1 paratype ♀, 16 km (10 miles) east of Bathurst, New South Wales, 850 m (2 800ft.), 20.X.1964, I.F.B. Common and M. F. Upton; 1 paratype ♀, Telegraph Station, National Park, Alice Springs, Northern Territory, 8.V.1967, A. M. Hayes ANIC; 1 paratype ♀, Mt. Norman area via Wallangara, Queensland, 7.8.X.1972, G. B. & S. R. Monteith UQ; 2 paratype ♀, Blackrock District, Victoria, J. E. Dixon; 1 paratype ♀, Kiata, Victoria, Oct. 1928, F. E. Wilson NM; 2 paratype ♀ (Reg. Nos. 120,734-5), Seaford, Victoria, W. F. Hill; 2 paratype ♂ (Reg. Nos. 120,736-7), Mt. Rosea (Grampians), Victoria, Nov. 1950, N. B. Tindale; 1 paratype ♂ (Reg. No. 120,738), Kiata, Victoria, 22.XI.1952, F. E. Wilson; 1 paratype ♀ (Reg. No. 120,739), Mouth Glenelg River, Victoria, 28.VIII.1965, F. J. Mitchell; 1 paratype ♂ (Reg. No. 120,740), Black Mountain, Canberra, Australian Capital Territory, 26.XI.1959, by sweeping vegetation, G. F. Gross; 1 paratype ♀ (Reg. No. 120,741), Adelaide, South Australia, H. M. Hale; 1 paratype ♂ (Reg. No. 120,742), Adelaide, South Australia, taken with sweepnet, N. B. Tindale; 1 paratype ♂ (Reg. No. 120,743), Pt. Lincoln, South Australia, A. M. Lea; 1 paratype ♀ (Reg. No. 120,744), near Coonalpyn, South Australia, Sept. 1967, beating *Leptospermum coriaceum* (FvM) Cheel, A. N. McFarland; 1 paratype ♂ (120,746), Kangaroo Island, South Australia, Oct. 1924; 2 paratype ♀ (120,747-8), 4 km (2.5 miles) south of Mt. Taylor, Kangaroo Island, South Australia, 31.XII.1965, beating heath shrubs, D. Seton and A. N. McFarland; 1 paratype ♂ (Reg. No. 120,749), South Australia, Rev. A. P. Burgess SAM.

Specimens examined: The types and two questionable specimens from Western Australia 1 ♀, 24 km (15 miles) east of Ravensthorpe, 110 m, 23.IX.1962, E. S. Ross and D. Q. Cavagnaro CAS; 1 ♀, Muchea, 4.IV.1967, F. H. Uther Baker SAM.

Ocirrhoe inconspicua (Dallas, 1851)

Figs. 11, 12 C-D

Cuspicona inconspicua Dallas, 1851 p. 297.

Lethierry and Severin, 1893 p. 180.

Ocirrhoe inconspicua Stål, 1967 p. 521. Distant, 1900a p. 422.*Description:*

General appearance: Green in life; apex of scutellum yellow; anterolateral margins of pronotum and basal exterior margin of corium and exterior margins of abdomen yellow or reddish yellow; first segment of antennae concolorous, rest ferruginous, apices of tibiae and tarsi reddish. Eyes and ocelli purplish. Foveae in basal angles of scutellum black. In museum specimens the green colour fading to dull yellow or pale red,

other colours as noted. Third antennal segment nearly as long as, about the same length as, or longer than second.

Head: Appearing strongly triangular and apically narrowly rounded; concolorous; anteriorly slightly convex, posteriorly more convex and slightly raised. Anteclypeus slightly surpassing apices of juga, lateral margins distinctly concave. Disc transversely rugulose and punctate.

Pronotum: Concolorous with coarse dense punctations, calli glabrous. Anterior margin oblique and slightly raised behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a small vertical carina. Anterolateral margins nearly straight, very narrowly explanate, this explanate portion

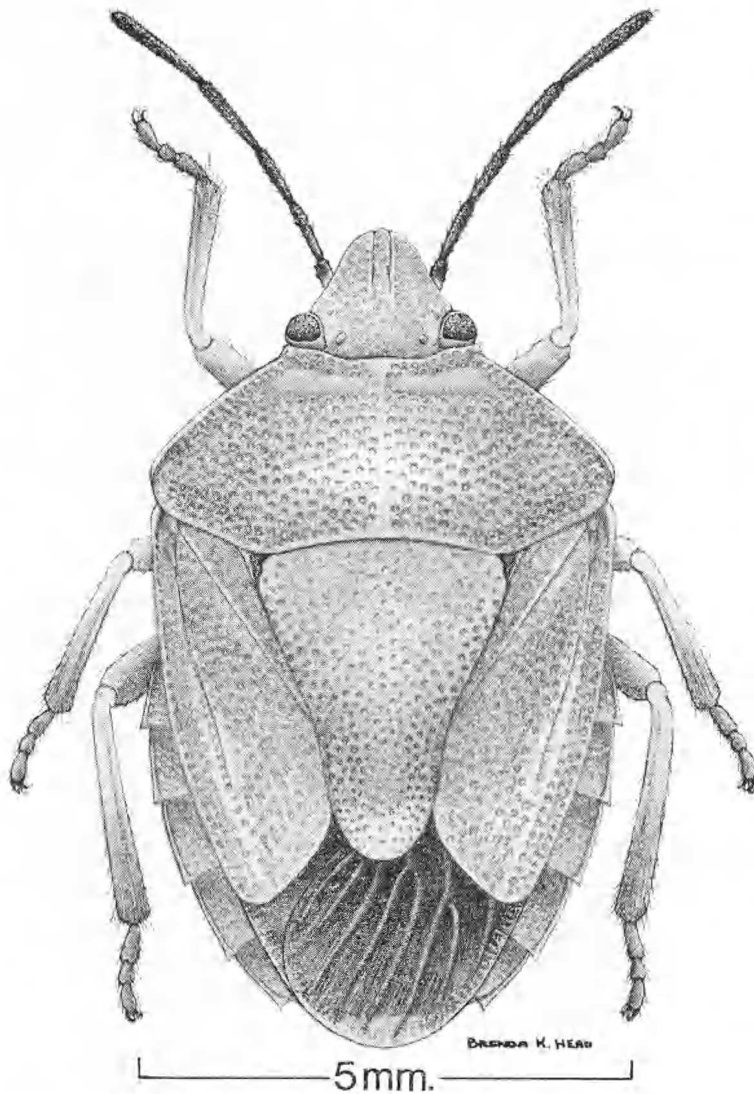


Fig. 11. Dorsal aspect of *Ocirrhoe inconspicua* (Dallas).

yellow or reddish yellow. Lateral angles behind explanate margin truncate, posterolateral and posterior margin slightly concave.

Scutellum: Concolorous with coarse dense punctations, apex yellow and almost impunctate. Fovea in each basal angle black. Raised in anterior half and flat posteriorly. A trace of a faint median longitudinal impunctate line present. Lateral margins gently convex in basal half then straight or gently rounded to broadly rounded apex. Frena reaching about half length.

Hemelytra: Coriaceous parts concolorous with regular coarse dense punctations, medial fracture glabrous towards apex. Exterior margins of coria slightly concave and thickened basally then faintly convex to shortly rounded apical angle, reaching middle of abdominal segment VI, laterotergites broadly exposed. Posterior margin of corium straight, inner angle very broadly rounded. Clavus elongate triangular, Membrane and veins pale brownish hyaline.

Abdomen: Medially a broad black longitudinal bar or series of black maculae behind apex of scutellum, laterally concolorous. Dorsal surface of pygophore reddish.

Laterotergites: Concolorous, densely punctate, posterior exterior angles produced into an acute black-tipped spine.

Underside: Concolorous, coarsely punctate except on sides of head exterior to bucculae, exterior margin of prothorax, evaporative areas,

ventrally along abdomen and appendages. Antennal segment I concolorous or yellowish, remaining segments pale red or reddish brown. Rostrum ventrally and its apex black. Tibiae apically and tarsi reddish brown. Lateral margins of prothorax, epipleuron, abdomen and apical margin of pygophore reddish or yellowish. Thoracic keels and a broad longitudinal medial stripe on abdomen yellowish.

Bucculae reaching to about middle of the eyes and rather elevated, medially lower, anteriorly forming a rounded lobe. Rostral segment I robust, reaching nearly to base of bucculae, II compressed and arched, just surpassing fore coxae, III reaching onto hind coxae and IV onto the base of ventrite IV. Antennae comparatively robust, ratio of segments (δ) 9 : 13 : 14 : 18 : 23. Metasternal-mesosternal keels of even height to just behind fore coxae, then gently and obliquely inclined downwards to rounded apex, almost reaching apex of prosternum, not deflected to left in ventral view. Legs normal without long pilosity, only the usual short pilosity on tibiae and tarsi, tibiae flattened, at least apically. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 12 C, hind margin of pygophore gently concave and laterally not convex. Apex of female abdomen Fig. 12 D, hind margins of first gonocoxae rather convex, inner margins a little elevated; posterior margins of VIIIth laterotergites produced into only a blunt not very obvious angle.

Dimensions—

MALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	21	36	1.9	5.4	32-39
Head width	21	37	1.2	3.1	33-38
Antennal segment I	38	9	0.6	7.5	7-10
Antennal segment II	37	13	0.9	6.9	11-15
Antennal segment III	37	14	1.0	7.5	12-15
Antennal segment IV	27	18	1.1	5.9	16-20
Antennal segment V	20	23	1.4	6.2	19-24
Pronotum width	21	90	5.1	5.7	79-98
Pronotum length	21	37	1.9	5.0	35-42
Total length	21	164	10.3	6.3	155-195

FEMALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	15	38	2.0	5.3	35-41
Head width	15	38	1.4	3.6	36-40
Antennal segment I	28	9	0.5	5.4	8-10
Antennal segment II	29	14	0.9	6.5	12-15
Antennal segment III	29	14	1.1	7.8	12-16
Antennal segment IV	24	19	1.0	5.0	17-21
Antennal segment V	21	23	1.3	5.7	21-26
Pronotum width	15	94	3.4	3.7	89-99
Pronotum length	15	40	1.3	3.3	38-41
Total length	15	174	7.2	4.1	160-185

Total length: 8.1-10.2 mm

Remarks: This species is easily distinguished from all other species of *Ocirrhoe* by the second antennal segment being about the same length as, or longer than, the second. In the non-infuscated antennal segments and the shape of the pygophore it is close to *unimaculata* Westwood, however the black spot in the basal angles of the scutellum and the shape of the pygophore indicates it is also related to *dallasi*. It is distinguished from *dallasi* by its more acuminate head which is not black at base, by the third antennal segment being about the same length as the second or even longer, and by the shallowly concave hind margin of the pygophore.

Ocirrhoe inconspicua has only been recorded from Western Australia with the exception of one male specimen from the mountains of north-eastern Victoria. Host records include a *Melaleuca* species and *Chamelaucium uncinatum*, both members of the Myrtaceae.

Location of type:

Type ♀ of *inconspicua* Dallas, "New Holland", in BM.

Specimens examined: Western Australia: the type and; 1 ♂, Bushmead, 17.XII.1966, on *Melaleuca*, E. M. Exley UQ; 3 ♂, 3 ♀, 1?, Bunbury, 3.I.1957, A. Snell; 1 ♀, Capel District (29 km south of Bunbury), 7.I.1957, A. Snell AM; 1 ♂, Yardie Creek, April 1958, Snell; 1 ♂, 1 ♀, Capel, 7.I.1957, Snell; 1 ♂, Collie, 13.I.1957, Snell NM; 1 ♂, Northhampton, 16.IX.1958, F. H. Uther-Baker; 1 ♀, 1 ♂, Kelm-scott, 16 Oct. & 7 Nov. 1958, the first in *Banksia* and scrub, J. Baldwin; 1 ♂, Yanchep, 16.X.1964, F. H. Uther-Baker; 1 ♂, Kings Park, 2.X.1965, H. Mincham; 1 ♀, Jandakot, 24.X.1965, F. H. Uther-Baker SAM; 1 ♂, 1 ♀, Mundaring Weir, 20.II.1963, 1 ♂, same locality, 10.XII.1964, J. Dell; 1 ♂, Wembley Downs, 1.XI.1969, on wax (*Chamelaucium uncinatum* Schau) only, E. A.

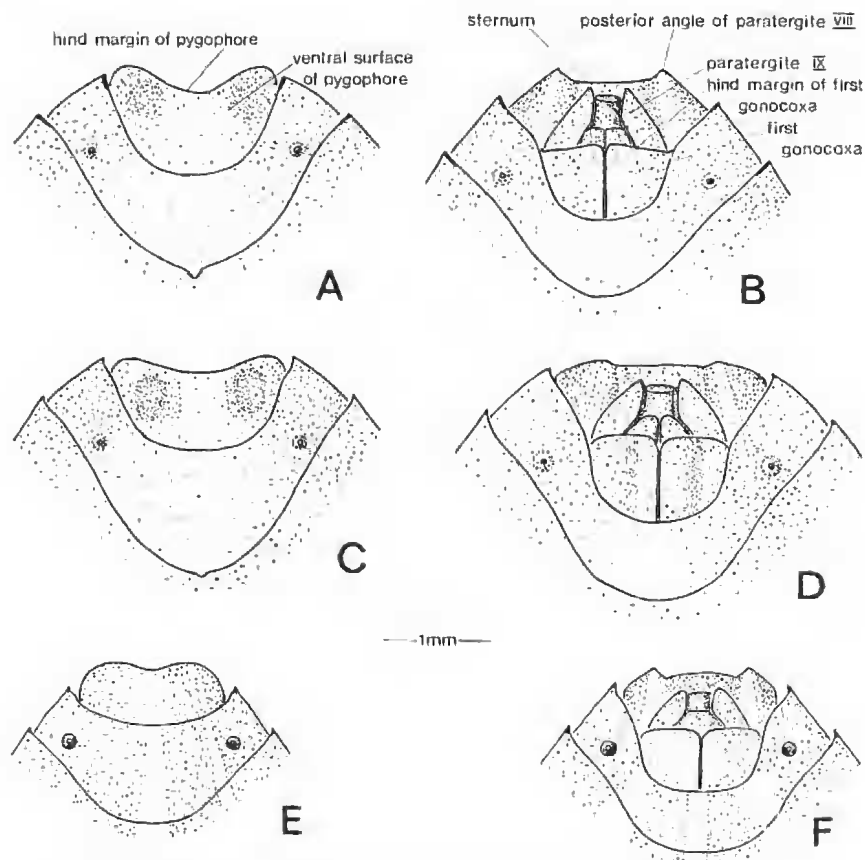


Fig. 12. *Ocirrhoe dallasi* sp. nov., *Ocirrhoe inconspicua* (Dallas) *Ocirrhoe cavenda* sp. nov. A-B. *Ocirrhoe dallasi*. A. ventral view of male abdomen. B. ventral view of female abdomen. C-D. *Ocirrhoe inconspicua*. C. ventral view of male abdomen. D. ventral view of female abdomen. E-F. *Ocirrhoe cavenda*. E. apex of male abdomen. F. apex of female abdomen.

Jefferys & M. Archer WAM; 1 ♀, Swan River, L. J. Newman; 1 ♀, Merredin, L. J. Newman; 1 ♂, 3 ♀, Yanchep, 51 km (32 miles) north of Perth, 13-23.XI.1935, 2 ♂, 1 ♀, same locality, 20-31.XII.1935, R. E. Turner BM; 2 ♂, 1 ♀, Tortoise Reserve, 39 km (24 miles) north of Perth, 16.XII.1971, J. A. Slater; 1 ♂, 1 ♀, Wildlife Reserve, 34 km (21 miles) north of Perth, 16-18.XII.1971, J. A. Slater SLATER; 1 ♂, Margaret River, 2 Nov.; Harvard Australian Expedition, P. J. Darlington AMNH; 1 ♀, Darlington, 150 m (450ft.), 5.IX.1962, E. S. Ross and D. Q. Cavagnaro CAS. Victoria: 1 ♂, Hotham Heights, Victoria, 1 800 m (5 900ft.), on snow, 1.II.1957, A. Neboiss NM.

***Ocirrhoe cavenda* sp. nov.**

Figs. 12 E-F, 13, 16

Description:

General appearance: Green in life with pronotum between and behind level of lateral angles pinkish, latter reaching lateral angles and posterolateral and posterior margins. Scutellum apically very broadly pinkish or luteous, in front of this luteous with a diffuse band of black punctations denser laterally, foveae in basal angles black. Antennae and tarsi yellowish brown. Museum specimens with the green faded to yellow.

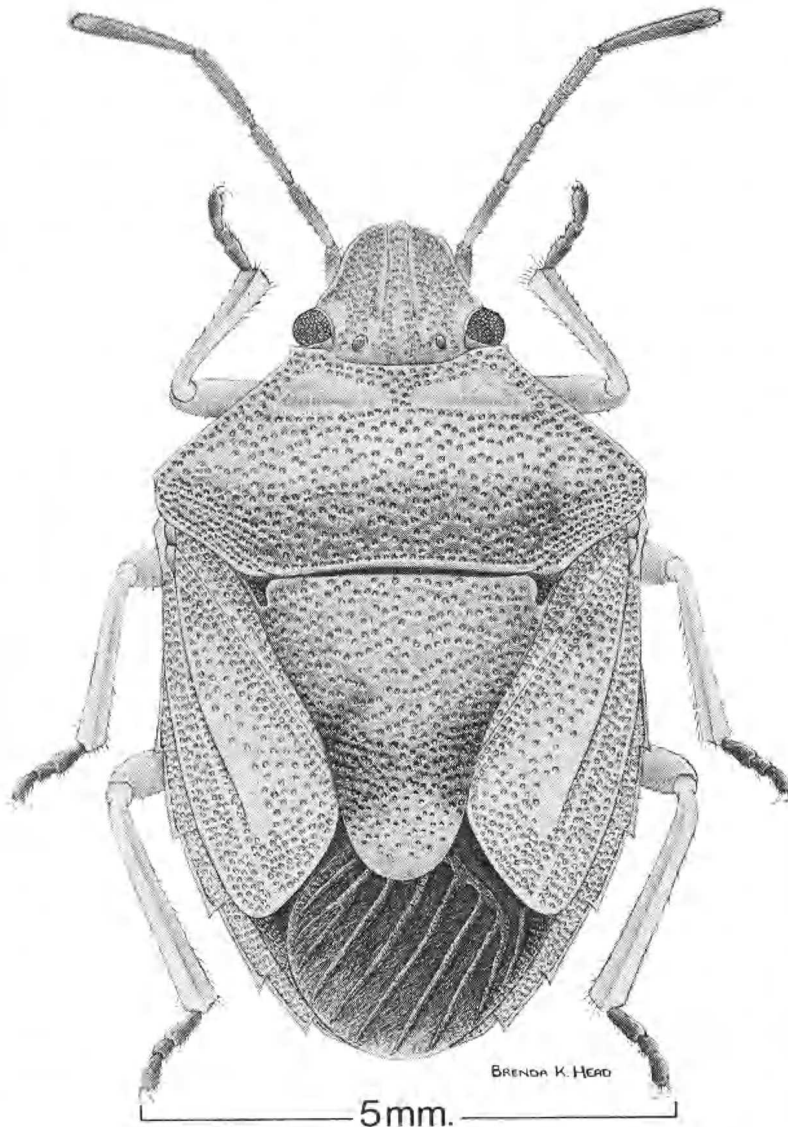


Fig. 13. Dorsal aspect of *Ocirrhoe cavenda* sp. nov.

Head: Appearing fairly broad and apically rather truncate, concolorous, anteriorly flattened and posteriorly only very little raised; anteclypeus, hardly surpassing apices of juga, lateral margins clearly concave. Disc rugulose punctate. Eyes and ocelli purplish red.

Pronotum: Anteriorly concolorous, from a line drawn between the lateral angles posteriorly pinkish and coarsely punctate, some punctations in the pinkish area infuscated, calli glabrous and frequently a submarginal callous line paralleling the anterolateral margins. Anterior margin oblique behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a small fine tooth or ridge. Anterolateral margins nearly straight. Lateral angles behind the reflexed margin truncate, posterolateral and posterior angles only slightly concave.

Scutellum: Concolorous with apex very broadly luteous or pinkish, before the pale apex a broad band of black punctations, constricted and less dense medially. A black fovea in each basal angle. Raised a little anteriorly and flat in posterior half. A trace of a faint median longitudinal line present. Lateral margins gently concave in basal half and then almost parallel to rather broadly rounded apex. Frena reaching to about half length.

Hemelytra: Coriaceous parts concolorous with coarse, but not dense, punctations; a glabrous streak just interior of posterior half of medial fracture. Exterior margins of coria distinctly concave basally then almost straight to shortly rounded apical angle, reaching about middle of abdominal segment VI; laterotergites broadly exposed. Posterior margin of corium straight, inner angle broadly rounded. Clavus elongate, triangular. Membrane and veins faintly brownish hyaline.

Abdomen: Concolorous, behind apex of scutellum infuscated.

Laterotergites: Concolorous, densely punctate, posterior exterior angles produced into a short black spine.

Underside: Concolorous; bucculae, propleuron, mesopleuron except exteriorly, metapleuron posteriorly and abdomen coarsely punctate. Antennal segments II-V pale reddish or yellowish-brown. Rostrum ventrally and the apical half of its terminal segment black. Tibiae towards apices and tarsi brown. On abdomen three pale longitudinal stripes, one medial and the other two midlateral. Spiracular eminences dark brown or black below the orifices.

Bucculae low and sinuated, reaching about middle of an eye, anteriorly produced into a blunt triangular process. Rostral segment I robust, reaching nearly to base of bucculae, II compressed and arched and reaching to about middle of fore coxae, III to middle of mid coxae and IV to base of hind coxae. Ratio of antennal segments (δ) 8 : 13 : 11 : 17 : 21. Metasternal-mesosternal keels highest between fore coxae, then obliquely truncate, then broadly rounded at apex, reaching nearly to apex of prosternum, directed to left apically in ventral view. Legs normal without pilosity, only the usual spines present, tibiae only flattened apically. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 12 E, hind margin of pygophore subangulately excavated, lateral lobes not strongly prominent. Apex of female abdomen Fig. 12 F, hind margins of first gonocoxae transverse, turning anteriorly towards the midline, interior margins not raised, apical angles of VIIIth paratergites angulately produced.

Dimensions—

MALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	5	34	1.6	4.9	31-35
Head width	5	36	1.4	3.9	34-38
Antennal segment I	9	8	0.7	9.2	7-9
Antennal segment II	9	13	1.1	8.4	11-15
Antennal segment III	9	11	0.9	8.3	9-12
Antennal segment IV	9	17	1.2	7.2	15-19
Antennal segment V	9	21	1.8	8.6	17-22
Pronotum width	5	82	6.5	7.9	73-87
Pronotum length	5	36	2.5	6.9	32-38
Total length	5	149	9.9	6.7	133-160

Dimensions—

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	4	35	—	—	33-36
Head width	4	37	—	—	35-39
Antennal segment I	6	8	—	—	8-9
Antennal segment II	5	14	—	—	13-14
Antennal segment III	5	11	—	—	10-13
Antennal segment IV	5	18	—	—	17-19
Antennal segment V	4	22	—	—	21-23
Pronotum width	4	84	—	—	76-91
Pronotum length	4	36	—	—	33-40
Total length	4	154	—	—	147-158

Total length; 6.9-8.3 mm

Remarks: This species occurs in a narrow belt in New South Wales and Victoria from near the Queensland border to about Bendigo in Victoria. It is very similar to *unimaculata* and easily confused with the latter but differs in the black foveae in the basal angles of the scutellum, the transverse band of black punctations before the pale apex of the latter, the more angulately incised posterior margin of the hind margin of the pygophore, the comparatively longer third antennal segment and its rather smaller size. Only ten specimens are known.

Location of types:

Holotype ♂ (Reg. No. I20,725), Mullaley, New South Wales, Jan. 1959, F. E. Wilson SAM; allotype ♀, Bendigo District, Victoria, 6.X.1928, ex J. E. Dixon collection donated Jan. 1940 NM; 3 paratypes ♂, Nollo Mountain 32 km (20 miles) north east of Rylston, New South Wales, 12.XI.1950, T. G. Campbell; 1 paratype ♀, 14 km (9 miles) north east of Putty, New South Wales, 28.X.1956, P. B. Carne ANIC; 1 paratype ♂, "Calumet", 42 km (26 miles) north east of Binnaway, New South Wales, Nov. 1931, A. Musgrave AM; 1 paratype ♂, 2 paratypes ♀, Lennox Bridge, New South Wales, 28.IX.1958, M. I. Nikitin BM 1959-57.

Specimens examined: The types only. The distribution of the known specimens has been added to the map on Fig. 16 so that its distribution may be compared with that of *unimaculata*.

***Ocirrhoe unimaculata* (Westward, 1837)**

Figs. 14, 15 A-E, 16

Rhynchocoris unimaculata Westwood, 1837, p. 29.

Ocirrhoe unimaculata Lethierry & Severin, 1893, p. 180. Distant, 1900a, p. 422.

Rhynchocoris roei Westwood, 1837, p. 30. Lethierry & Severin, 1893, p. 181.

Ocirrhoe roei Distant, 1900b, p. 815, pl. 52, fig. 12. *new synonym.*

Cuspicona fasciata Dallas, 1851, p. 297, pl. 10, fig. 3.

Description:

General appearance: Green in life with an elongate oval pinkish or yellow transverse bar between, but not reaching, lateral angles and posterolateral margins of pronotum. Scutellum apically yellow. Foveae in basal angles concolorous; antennae and tarsi yellowish brown. Museum specimens with the green faded to yellowish, pink or light red. Other colours as noted. Eyes and ocelli purplish.

Head: Appearing fairly broad and apically rather truncate, concolorous, anteriorly flattened and posteriorly very little raised; anteclypeus hardly surpassing apices of juga, lateral margins clearly concave. Disc rugulosely punctate. Eyes and ocelli greyish to purplish red.

Pronotum: Concolorous with rather coarse sparse punctations, latter rather infuscated in the area of the pale patch, calli glabrous. Between lateral angles a very elongate transverse pale pink or yellow bar not reaching lateral angles or posterior margin. In some examples an irregular yellow callous line just inside anterolateral margins. Anterior margin oblique behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a very small tooth. Anterolateral margins nearly straight. Lateral angles behind the reflexed margin concave, posterolateral and posterior margins only slightly concave.

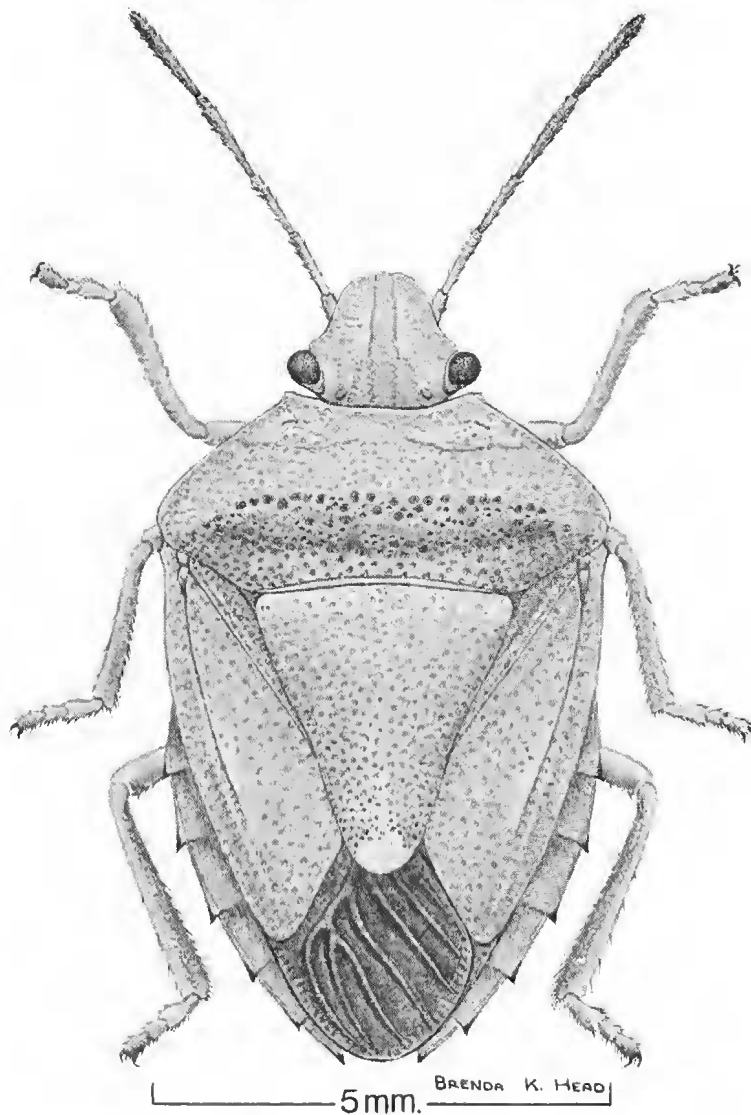


Fig. 14. Dorsal aspect of *Ocirrhoe unimaculata* (Westwood).

Scutellum: Concolorous with evenly distributed fairly dense vaguely fuscous punctations, apex broadly yellow and impunctate. A concolorous foveae in each basal angle. Raised a little anteriorly and flat in posterior half. A faint raised medial longitudinal line present. Lateral margins gently convex in basal half and then converging gently to rounded apex. Frena reaching about $\frac{4}{7}$ of length.

Hemelytra: Coriaceous parts concolorous with regular, moderately dense punctations. Exterior margins of coria faintly concave basally then broadly convex to shortly rounded apical angle, reaching about middle of abdominal segment VI, laterotergites broadly exposed. Posterior margin of corium straight, inner angle broadly rounded. Clavus very elongate triangu-

lar. Membrane and veins hyaline, frequently rather brownish.

Abdomen: Concolorous, infuscated on either side of apical portion of scutellum.

Laterotergites Concolorous, densely punctate, posterior exterior angles produced into a short, minutely black tipped spine.

Underside: Concolorous, punctate on propleuron, base of mesopleura, hind portion of metapleuron and abdomen, coarser laterally on the latter. Antennal segments II-V pale or yellowish brown. Rostrum ventrally and its apex black. Tarsi brown. In green examples the sternites and three longitudinal lines on the abdomen, one medial and the others midlaterally on each side, yellow. Spiracles with their

orifices black. Apical margin of pygophore or in females apical margins of VIIIth paratergites frequently narrowly black. Many examples with two large subquadrate pink markings on either side of the midline, a pair each on segments III and IV.

Bucculae low and sinuated, reaching about middle of an eye, anteriorly produced into a blunt lobulate process. Rostral segment I robust, reaching nearly to base of bucculae; II compressed and arched, reaching about middle of fore coxae, III to middle of hind coxae and IV just onto base of abdomen. Ratio of antennal segments (δ) 8:16:12:20:23. Metasternal-mesosternal keels highest between fore coxae then obliquely truncate, reaching nearly apex of prosternum, directed to left in

ventral view. Legs normal without long pilosity, only a few spines present, tibiae only flattened apically. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 15 A, hind margin of pygophore only slightly concave and laterally not produced into prominent lobes. Clasper Fig. 15 E, strongly F-shaped, the upper ramus compressed and darkly sclerotized towards its tip. Phallosoma Figs. 15 C-D, short and honey-coloured, "lappet" processes rather elongate, conjunctiva reflexed downward, medial penial plates elongate in the axis of the aedeagus, notched ventrally in lateral view, in ventral view broad and diverging. Apex of female abdomen Fig. 15 B, hind margins of first gonocoxae transverse and nearly truncate, interior margins not raised; apical angles of VIIIth paratergites angulately produced.

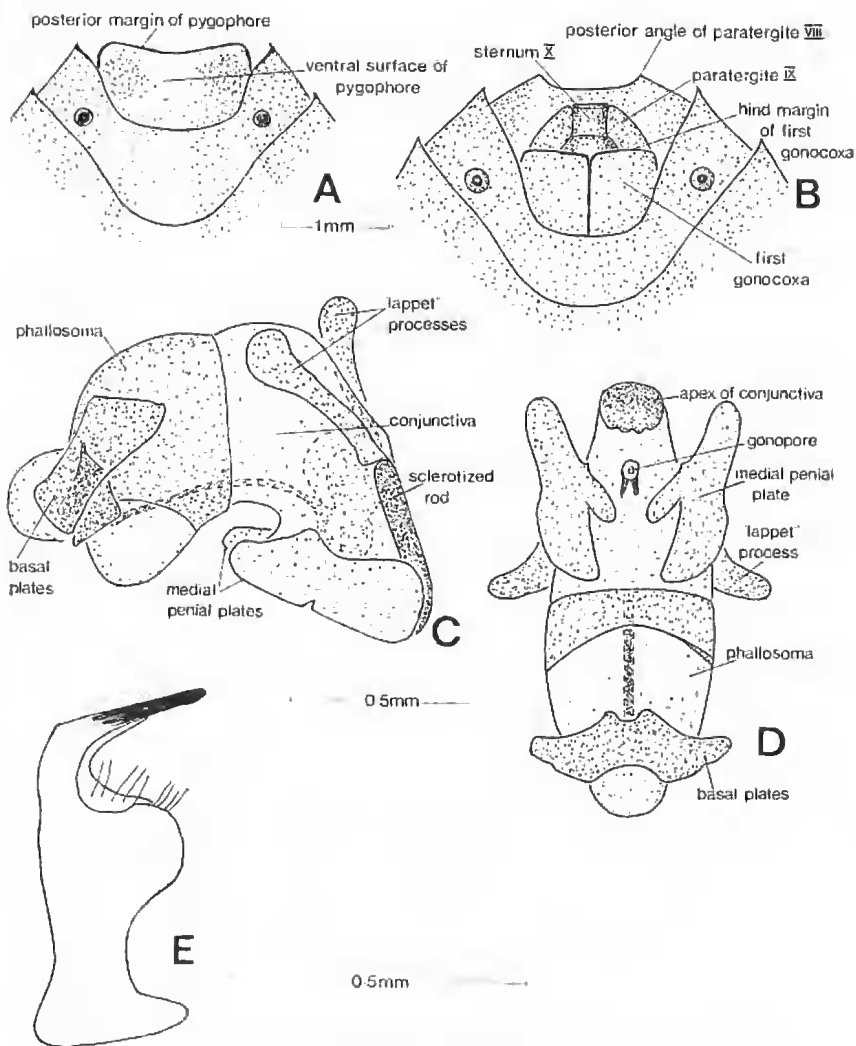


Fig. 15. *Ocirrhoe unimaculata* (Westwood). A. ventral aspect of male abdomen. B. ventral aspect of female abdomen. C. left-hand side aspect of aedeagus. D. ventral aspect of aedeagus. E. clasper.

Dimensions—

MALES FROM SOUTHERN AUSTRALIA

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	20	35	1.9	5.4	31-38
Head width	20	38	1.5	4.1	35-40
Antennal segment I	37	8	0.8	9.2	7-9
Antennal segment II	38	16	1.0	6.5	14-18
Antennal segment III	38	12	1.3	11.2	10-15
Antennal segment IV	33	20	1.1	5.5	17-22
Antennal segment V	25	23	1.3	5.6	21-25
Pronotum width	20	92	4.5	4.9	85-98
Pronotum length	20	38	2.6	6.7	33-43
Total length	20	160	8.0	5.0	148-172

FEMALES FROM SOUTHERN AUSTRALIA

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	20	37	1.8	4.8	34-40
Head width	20	39	1.5	3.8	36-42
Antennal segment I	36	9	0.8	8.7	7-11
Antennal segment II	38	17	1.3	8.0	14-19
Antennal segment III	37	12	1.3	11.2	10-14
Antennal segment IV	32	19	1.0	5.3	17-22
Antennal segment V	28	23	1.4	6.0	20-25
Pronotum width	20	96	5.1	5.4	85-109
Pronotum length	20	40	4.4	11.1	26-47
Total length	20	174	9.4	5.4	155-200

MALES FROM QUEENSLAND AND NEW SOUTH WALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	19	34	1.4	4.2	31-37
Head width	19	36	1.0	2.8	35-38
Antennal segment I	32	7	0.9	12.3	6-9
Antennal segment II	34	16	1.2	7.7	13-18
Antennal segment III	34	11	1.1	10.2	9-14
Antennal segment IV	30	20	1.4	7.3	17-23
Antennal segment V	24	23	1.4	6.2	20-25
Pronotum width	19	84	4.5	5.3	77-91
Pronotum length	19	35	2.0	5.7	32-38
Total length	19	154	10.6	6.9	137-175

FEMALES FROM QUEENSLAND AND NEW SOUTH WALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	19	36	1.2	3.4	35-39
Head width	19	38	1.5	4.0	36-42
Antennal segment I	35	8	0.8	9.9	7-9
Antennal segment II	36	17	1.2	7.4	15-20
Antennal segment III	39	11	0.9	7.8	10-14
Antennal segment IV	36	19	1.3	6.9	16-22
Antennal segment V	28	23	1.3	5.8	21-25
Pronotum width	19	92	3.9	4.2	88-99
Pronotum length	19	39	2.2	5.8	36-42
Total length	19	172	10.4	6.1	148-190

Total length (both populations): 7.1-10.4 mm

Remarks: The type of *unimaculata* Westwood is in poor condition but as it is a male and the pygophore is intact the identity of the species is not in doubt. The types of both *roei* Westwood and *fasciata* Dallas are females in better condition and belong also to this same species. The type of *roei* is the largest example yet seen in the genus.

The species is fairly easily recognised by the pale, usually pinkish elongate-oval, transverse patch near the hind margin of the pronotum. Two other species have a similar pale patch on the pronotum, notably *cavenda* and *virescens*. From *cavenda unimaculata* differs in having pale foveae in the basal angles of the scutellum, in lacking a preapical transverse band of black

punctations before the apex of the scutellum and in the hind margin of the pygophore being only faintly concave. From *virescens unimaculata* differs by lacking pale lateral margins to the scutellum, by having the hind margin of the pygophore only faintly excavate (triangularly excavate in *virescens*) and in having the hind margins of the female first gonocoxae transverse (convex in *virescens*).

Ocirrhoe unimaculata is widely distributed near and on the coast of Australia south of about 26°S latitude. It has been taken on the following species of plants—*Correa* sp. (Muston, Kangaroo Island), *Myoporum insulare* R. Br. (Coorong, South Australia), *Geijeria linearifolia* (D.C.) J. M. Black (Mannum, South Australia), *Platylobium* sp. (Mt. Lofty, South Australia), *Beyeria leschenaulti* (D.C.) Baill and *Melaleuca pubescens* Schau (Hallett Cove, South Australia) and in a formation dominated by *Leucopogon parviflora* (Andr.) Lindl. and *Acacia sophorae* (Labill) R.Br. (near Robe, South Australia). Specimens have been captured in all months of the year.

Populations from the southern states of Australia and from New South Wales south of the latitude of about Sydney are somewhat larger than populations from northern New South Wales and southern Queensland. The measurements of the two populations have been analysed separately in the descriptive section.

Location of types:

Type ♀ of *unimaculata* Westwood, "New Holland", and type ♀ of *roei* westwood, "SR" (= Swan River) in HOPE; type ♀ of *fasciata* Dallas, "New Holland", in BM.

Specimens examined: The types and 144 specimens from 58 localities from the following collections (numbers examined in parentheses):—QU(24), QM(4), AM(11), ANIC(19), NM(10), SAM(34), WAM(2), STOCKHOLM(4), BRUSSELS(1), BM(11), J. A. SLATER(1), AMNH(10), CAS(1), BISHOP(12). As this is a common species individual Australian and Tasmanian records have not been listed in detail but are plotted on Fig. 16.



Fig. 16. Distribution of *Ocirrhoe cavenda* sp. nov. and *Ocirrhoe unimaculata* (Westwood).

Ocirrhoe prasinata (Stål, 1859) nov. comb

Figs. 17, 19 A-B.

Cuspicona prasinata Stål, 1859, p. 231; 1876, p. 103, Lethierry and Severin, 1893, p. 180.*Description:*

General appearance: Museum specimens greenish-yellow or yellow, in fresher specimens apex of third and fourth and most of fifth antennal segments reddish. Eyes and ocelli greyish. Foveae in basal angles of scutellum concolorous or greyish.

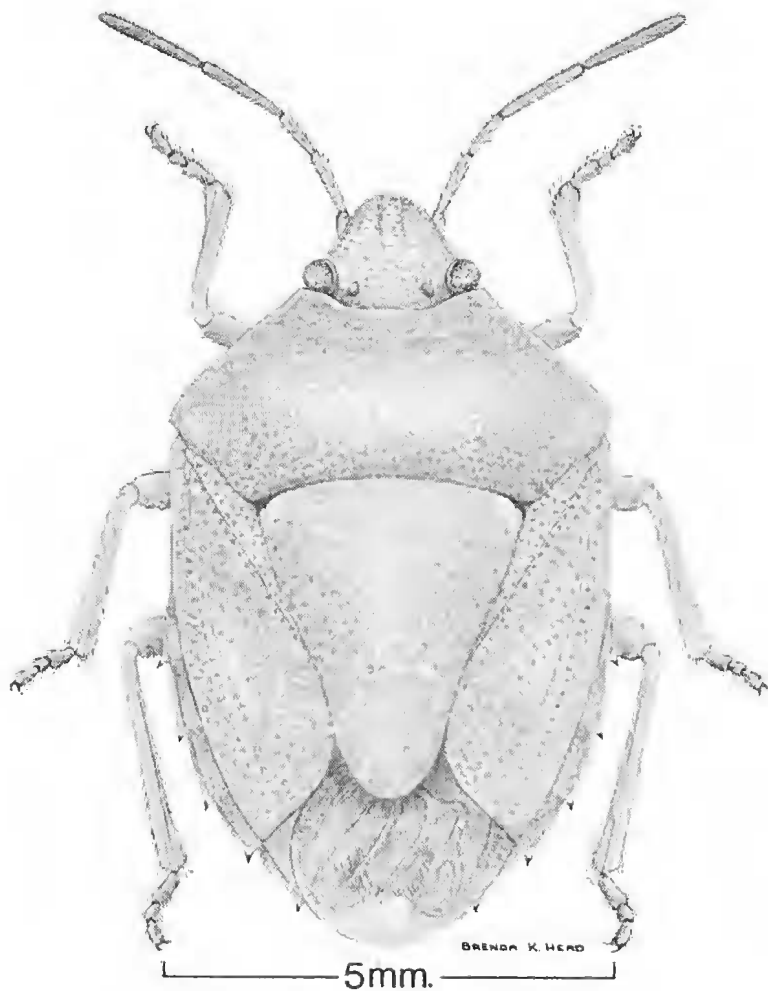
Head: Appearing moderately elongate, concolorous, triangular, anteriorly flattened and posteriorly a little raised; anteclypeus slightly surpassing apices of juga, lateral margins clearly concave. Disc rugulosely punctate. Eyes and ocelli greyish or reddish-grey.

Pronotum: Concolorous with fine dense concolorous or slightly infuscated punctations, calli glabrous. A faint trace of a medial longitudinal line. Anterior margin oblique behind eyes and

trapeziformly excavate behind collum, anterolateral angles prominent as a small tooth. Anterolateral margins straight or slightly convex. Lateral angles behind the reflexed margin shortly truncate, posterolateral and posterior margins only slightly concave, posterior margin slightly concave.

Scutellum: Concolorous with fine dense concolorous or slightly infuscated punctations, an almost concolorous fovea in each basal angle. Raised very little anteriorly and flat posteriorly. Lateral margins gently convex in basal 4/7 and then converging gently to broadly rounded apex. Frena reaching about 4/7 of length.

Hemelytra: Coriaceous parts concolorous with fine dense concolorous or slightly infuscated punctations. Exterior margins of coria faintly concave basally and then faintly convex to nearly rectangular apical angle, reaching about middle of abdominal segment VI, laterotergites broadly exposed. Posterior margin of corium straight, inner angle broadly rounded. Clavus very elongate triangular. Membrane and veins hyaline.

Fig. 17. Dorsal aspect of *Ocirrhoe prasinata* (Stål).

Abdomen: Concolorous, some dorsal portions of pygophore pinkish.

Laterotergites: Concolorous, coarsely punctate exteriorly, posterior exterior angles produced into a short, minutely black tipped spine.

Underside: Concolorous, coarsely punctate except on head, margin of propleuron, evaporative areas and legs. Apex of third and fourth and most of fifth antennal segments reddish or orange. Rostrum ventrally and its extreme apex black. Spiracles concolorous or faintly infuscated.

Bucculae high and moderately sinuated, reaching about middle of an eye, anteriorly produced into a rather triangular lobulate process. Rostrum segment I robust, reaching nearly to base of

bucculae, II compressed and arched and reaching middle of fore coxae, III to middle of hind coxae and IV to about middle of ventrite III. Ratio of antennal segments (δ) 9: 15; 12: 21: 25. Metasternal-mesosternal keels depressed a little anteriorly, nearly reaching apex of prosternum, anteriorly rounded and directed to left in ventral view. Legs normal with sparse pilosity, tibiae only flattened apically. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 19 A, hind margin of pygophore laterally produced into a reflexed lobe on either side, between these deeply excavate this excavation with a smaller excavation on midline. Apex of female abdomen Fig. 19 B, hind margins of first gonocoxae transverse and nearly truncate, interior margins not raised.

Dimensions—

MALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	8	35	2.1	6.0	30-37
Head width	9	37	0.9	2.4	36-39
Antennal segment I	15	9	0.5	5.1	9-10
Antennal segment II	17	15	1.0	6.7	13-16
Antennal segment III	17	12	1.3	10.7	11-15
Antennal segment IV	14	21	1.4	7.0	19-24
Antennal segment V	9	25	2.3	9.0	23-29
Pronotum width	9	92	1.9	2.0	90-95
Pronotum length	9	38	1.3	3.3	37-40
Total length	9	171	4.9	2.9	165-180

FEMALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	13	35	0.9	2.5	33-36
Head width	13	38	1.1	3.0	37-40
Antennal segment I	16	9	0.9	10.1	8-10
Antennal segment II	19	15	1.3	9.0	11-17
Antennal segment III	19	12	1.3	10.7	11-15
Antennal segment IV	13	20	1.8	9.2	17-24
Antennal segment V	13	23	2.4	10.3	21-29
Pronotum width	13	93	5.0	5.4	85-103
Pronotum length	13	39	2.3	6.0	35-43
Total length	13	169	8.8	5.2	155-181

Total length: 8.1-9.4 mm

Remarks: This species is very easily confused with *Cuspicona privata* Walker on a macroscopic examination. It appears to be a true *Ocirrhoe* on the following features:—the antennae are more robust than in *Cuspicona* species, the anterolateral margins of the pronotum are reflexed and this reflexed area continues for a short distance onto the lateral angle and the hind margins of the first gonocoxae of the female are transverse and also truncate, a feature which occurs commonly in *Ocirrhoe* but only in *Cuspicona* in the long-headed *intacta* group which *O. prasinata* does not resemble. *O.*

prasinata has much less flattened tibiae than some of its congeners whereas *C. privata* has more flattened tibiae than other species of *Cuspicona*. It is in the area of these two species (*O. prasinata* and *C. privata*) that the two genera become rather close to each other and it is likely the point where the two genera diverged, whether one arose out of the other or both diverged from a common ancestor must remain unanswered.

Within *Ocirrhoe* itself *prasinata* appears to be related most closely to *coronata* by virtue of the rather similar posterior margin of the pygophore

of the male, the two strong lobes, one either side of the midline, in *coronata* are reduced to only slightly prominent lobes in *prasinata*.

C. prasinata occurs near the eastern and southern coasts of the Australian mainland from southern Queensland to about the Mt. Lofty Ranges and Kangaroo Island in South Australia.

The high coefficients of variation noted for the lengths of the antennal segments seem to be due to a progressive shortening of their length as one progresses from Queensland to South Australian examples and does not appear to indicate a specific difference.

Location of types:

Typus ♂, allotypus ♀, paratype ♂, paratype "Sidney, Kinb." (for "Sydney, Kinberg"), STOCKHOLM.

Specimens examined: The types and Queensland 1 ♂, 1 ♀, Tibrogargan Creek, 4.IX.1953, on *Leptospermum*, T. E. Woodward UQ; 1 ♀, Springbrook, 12.X.1959, A. N. Burns; 1 ♂, Burleigh, 16.IX.1960, A. N. Burns NM. A.C.T. 3 ♂, 3 ♀, (2 ♀ Lake Windemere), Jervis Bay, 18-19.IX.1951, T. G. Campbell ANIC. Victoria 1 ♀, Mallacoota, 23.XI.1965, A. Neboiss, 1 ♀, locality and date illegible, donated by F. P. Spry 5.X.1922 NM. South Australia 1 ♀, Tea-tree Gully, 16.XI.1954, R. V. Southcott; 2 ♀, E.S.I. 833, Belair, 10.X.1952, G. F. Gross; 1 ♀, E.S.I. 594, Belair, 11.I.1953, G. F. Gross; 1 ♂, Belair National Park, 20.X.1965, by sweeping, B. K. Hubbard and A. N. McFarland; 1 ♀, Kangaroo Island, A. M. Lea; 1 ♂, Kangaroo Island, Oct, 1924; 1 ♀, 16 km (10 miles) west of Vivonne Bay, 12.X.1966, by beating, A. N. McFarland and M. Pate SAM; 2 ♀ without further locality AMNH. Unlocalised 1 ♀ AM.

Ocirrhoe coronata sp. nov.

Figs. 18, 19 C-D.

Description:

General appearance: Museum specimens yellow; second, third and fourth antennal segments reddish, fifth black medially and narrowly reddish at base and apex. Eyes and ocelli reddish-grey. Fovea in basal angles of scutellum concolorous.

Head: Appearing moderately elongate, concolorous, triangular, anteriorly flattened and posteriorly a little raised, apex of anteclypeus in same curve as apices of juga; lateral margins clearly concave. Disc coarsely and rugulose

punctate. Eyes and ocelli reddish or reddish-grey.

Pronotum: Concolorous with rather coarse vaguely infuscated punctations, calli glabrous. Lateral margins tending orange. No trace of a median longitudinal line. Anterior margin oblique behind eyes and semicircularly excavate behind collum, anterolateral angles prominent as a fine tooth. Anterolateral margins straight. Lateral angles behind the termination of the reflexed anterolateral margins shortly truncate, posterolateral and posterior margins only slightly concave.

Scutellum: Concolorous with coarse dense slightly infuscated punctations and concolorous fovea in each basal angle. Raised very little anteriorly and flat posteriorly. Lateral margins gently convex in basal half and then broadly rounded and converging to subanceolate apex. Frena reaching about half length.

Hemelytra: Coriaceous parts concolorous with fine not very dense slightly infuscated punctations. Exterior margins of coria faintly concave basally then obtuse angled and then straight and converging to shortly rounded apical angle, reaching about middle of segment VI, laterotergites very broadly exposed. Posterior margin of corium rather rounded, inner angle broadly rounded. Clavus very elongate triangular. Membrane and veins fumose hyaline (holotype) or hyaline (allotype and paratype).

Abdomen: Reddish interiorly and on dorsum of pygophore.

Laterotergites: Concolorous, coarsely punctate exteriorly, hind and inner margins of seventh reddish. Posterior exterior angles produced into a short spine which is minutely black tipped.

Underside: Concolorous, coarsely punctate only on propleura, towards base of mesopleura, hind portion of metapleura, laterally on abdomen and very sparsely on ventral surface of pygophore. First antennal segment concolorous, second, third, fourth and base and apex of fifth reddish, rest of fifth black. Rostrum ventrally and its extreme apex black. Spiracles concolorous.

Bucculae high and moderately sinuated, reaching to about anterior margin of an eye, anteriorly produced into a subtriangular lobulate process. Rostral segment I robust, reaching nearly to base of bucculae, II compressed and slightly arched and reaching about middle of fore coxae, III to anterior part of mid coxae, and IV to posterior part of hind coxae. Metasternal-mesossternal keel rather raised anteriorly and

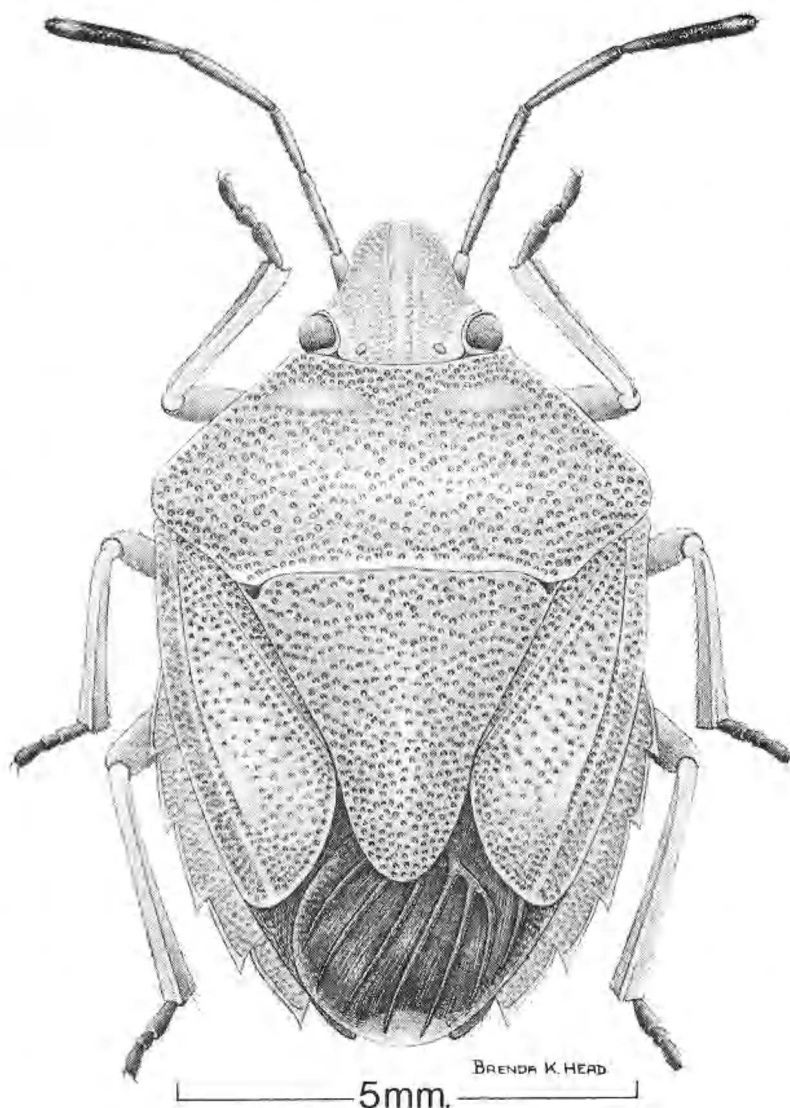


Fig. 18. Dorsal aspect of *Ocirrhoe coronata* sp. nov.

forward of this obliquely truncate, reaching apex of prosternum, directed to left in ventral view. Legs normal with sparse pilosity, tibiae not very flattened. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 19 C, hind margin of pygophore laterally produced into a reflexed lobe on either side, between these excavate, this excavation with a broad tooth on either side of the midline, between the latter notched. Female Fig. 19 C, posterior margins of first gonocoxae transverse, medially slightly concave; posterior angles of eighth laterotergites sharply angulated. Dimensions (holotype): Head length 40; head width 42; antennal segment I 10, 10; antennal segment II 20, 19; antennal segment III 15, 15; antennal segment IV 26, 25; antennal segment V 29, 28; pronotum width 102; pronotum length 44; total length 185; (allotype) head length 42; head width 42; antennal segment I 9, 9; antennal segment II 21,

22; antennal segment III 17, 17; antennal segment IV 25, 25; antennal segment V 28, —; pronotum width 102; pronotum length 44; total length 192.

Total length: 9.0-9.6 mm.

Remarks: This species appears to have only one close relative in the genus, namely *prasinata* (Stål) which it resembles in the shape of the posterior margin of the pygophore. The three known specimens come from two fairly widely separated localities.

Location of types:

Holotype ♂ (Reg. No. T7215), Iron Range, Cape York Peninsula, Queensland, 26.V.-2.VI. 1971, B.K. Cantrell QM; allotype ♀, Mt. Tozer, Iron Range, North Queensland, 20.IV.-1.V. 1973, G. Monteith UQ; paratype ♂, Finke River, Central Australia, Dr. H. Basedow SAM.

Specimens examined: The types only.

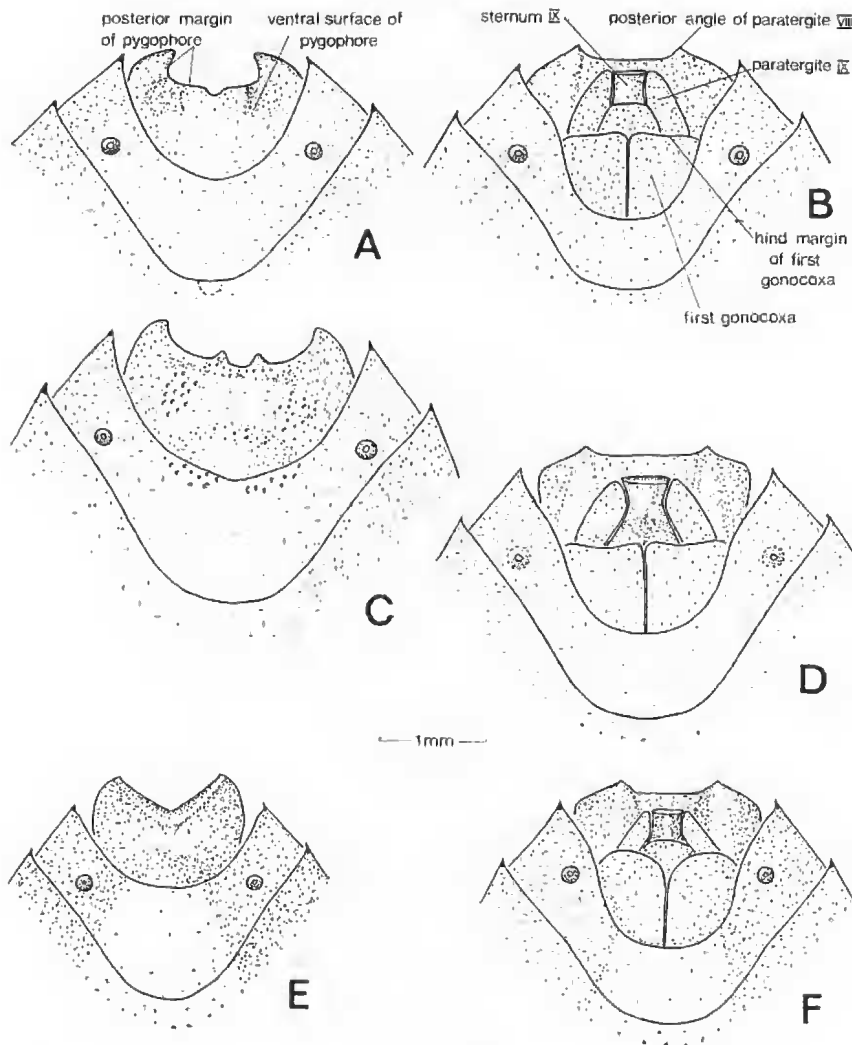


Fig. 19. *Ocirrhoe prasinata* (Stål), *Ocirrhoe coronata* sp. nov. *Ocirrhoe virescens* (Westwood). A-B. *Ocirrhoe prasinata*. A. ventral view of male abdomen. B. ventral view of female abdomen. C-D. *Ocirrhoe coronata*. C. ventral view of male abdomen. D. ventral view of female abdomen. E-F. *Ocirrhoe virescens*. E. ventral view of male abdomen. F. ventral view of female abdomen.

Virescens Group

This group contains only the one species, *Ocirrhoe virescens* (Westwood), which is restricted to Queensland. The group characteristics are:—more elongate than other species of *Ocirrhoe* (pronotum width: total length almost 1:2); rostrum long reaching onto, or almost onto ventrite V; tibiae flattened only apically; and in *virescens* the hind margins of the first gonocoxae of the female arcuately convex; head not marked with black punctations; antennae not apically infuscated and foveae in basal angles of scutellum concolorous.

There is a close resemblance to *O. unimaculata* in the pale transverse bar on the hind portion of the pronotum and the large red maculae on either side on ventrites III and IV. Like *unimaculata* and other species in the *unimaculata* group the tibiae are only slightly flattened.

Ocirrhoe virescens (Westwood, 1837)

Figs. 19 E-F, 20

Rhaphigaster virescens Westwood, 1837, p. 31.

Ocirrhoe? virescens Distant, 1900b, p. 815, pl. 53 fig. 7.

Description:

General appearance: In life green with a broad transverse bar on the hind portion of scutellum, lateral margin and apex of scutellum bright yellow or orange-yellow. In older museum specimens yellow or yellowish-brown with the transverse bar on the scutellum and the scutellar margins and apex paler or more orange. First segment of antennae concolorous, rest brown or reddish-brown. Eyes and ocelli reddish-grey or black. Foveae in basal angles of scutellum concolorous.

Head: Appearing strongly elongate triangular but actually about as wide across eyes as long. Concolorous, anteriorly flattened and posteriorly raised, apex of anteclypeus in same curve as apices of juga; lateral margins only slightly concave. Disc coarsely but not unduly densely punctate, some transverse rugulosity. Eyes and ocelli reddish-grey to black.

Pronotum: Concolorous with rather coarse evenly spaced punctations, latter tending fuscous posteriorly. Calii concolorous but glabrous. Between lateral angles and reaching almost to hind margins an elongate trapeziform transverse yellow or orange-yellow bar not reaching lateral angles or posterolateral margins. Anterior margin oblique behind eyes and trapeziformly excavate behind collum, anterolateral angles represented by a small toothed spine. Anterolateral margins straight. Lateral angles behind termination of reflexed anterolateral margins shortly truncate, posterolateral and posterior margins only slightly concave.

Scutellum: Concolorous medianly in basal half but along lateral margins and tip broadly yellow

or orange-yellow; with coarse fairly evenly spaced concolorous or fuscous punctations. Foveae in basal angles concolorous. Raised anteriorly and flat posteriorly. Rather elongate, lateral margins only slightly convex in basal $\frac{1}{7}$ and then changing direction and faintly convex to sublanceolate apex which is slightly reflexed either side of midline. Frena reaching about $\frac{1}{7}$ length.

Hemelytra: Coriaceous parts concolorous but inner angle of corium infuscated with black. Punctations evenly distributed except just inside of apical portion of medial fracture where there is a narrow glabrous area. Exterior margins of coria faintly concave basally and then broadly convex to very shortly rounded apical angle, reaching about middle of segment VI, laterotergites narrowly exposed. Posterior margin of corium nearly straight, inner angle broadly rounded. Clavus very elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous exteriorly and broadly reddish behind scutellum, dorsum of pygophore also reddish.

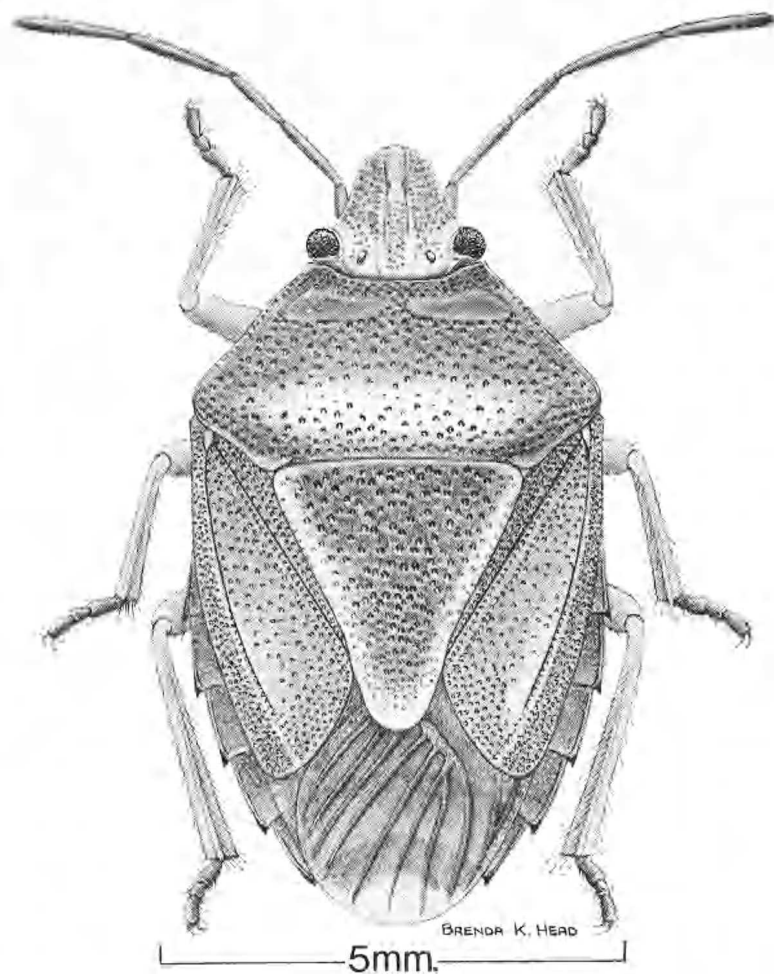


Fig. 20. Dorsal aspect of *Ocirrhoe virescens* (Westwood).

Laterotergites: Concolorous and coarsely and densely punctate. Posterior exterior angles produced into a short black-tipped spine.

Underside: Concolorous, coarsely punctate only on propleura, ventrally on mesopleura and posteriorly on metapleura. First antennal segment concolorous, remaining segments brownish tending reddish-brown towards apex. Rostrum ventrally and tip black. Abdomen medially with pygophore broadly pale, a quadrate reddish patch just laterally of midline on either side on segments III and IV, not in contact with either fore or hind margins of these segments. Tarsi brown. Spiracles concolorous.

Bucculae low and moderately sinuated, reaching to about middle of eye, anteriorly produced into a subtriangularly lobulate process. Rostral segment I robust, reaching to base of bucculae, II compressed, arched and reaching onto meso-

sternum, III to past hind coxae and IV onto ventrite V. Ratio of antennal segments (δ) 9: 19: 14: 23: 25. Metasternal-mesosternal keels highest just behind fore coxae, forward of this obliquely and truncately directed downwards then anteriorly shortly rounded, not reaching apex of prosternum, directed to left in ventral view. Legs normal without pilosity, only the normal bristles, tibiae only slightly flattened apically. Abdomen broadly U- or V-shaped in posterior view. Apex of male abdomen Fig. 19 E, hind margin of pygophore laterally produced into a prominent lobe on each side whose external margin is convex, between the lobes a strong V-shaped incision, on the ventral surface slightly in front of this a V-shaped ridge. Apex of female abdomen Fig. 19 F, hind margins of first gonocoxae strongly arcuately convex, inner margins slightly raised, angles of VIIIth paratergites distinctly acute.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	10	35	1.1	3.0	34-37
Head width	10	37	0.7	1.8	36-38
Antennal segment I	19	9	0.8	10.0	7-10
Antennal segment II	18	19	1.2	6.1	16-21
Antennal segment III	18	14	0.9	6.7	12-15
Antennal segment IV	14	23	1.3	5.9	20-25
Antennal segment V	13	25	1.3	5.2	23-27
Pronotum width	10	86	3.2	3.7	81-90
Pronotum length	10	36	1.2	3.3	33-37
Total length	10	164	4.9	3.0	155-170

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	16	38	2.4	6.5	35-43
Head width	16	39	2.3	5.9	33-43
Antennal segment I	27	9	0.7	7.2	8-10
Antennal segment II	26	21	1.7	8.2	18-25
Antennal segment III	26	15	2.5	16.5	12-21
Antennal segment IV	23	25	2.0	8.2	23-29
Antennal segment V	19	26	1.7	6.3	23-29
Pronotum width	16	96	5.0	5.2	88-106
Pronotum length	16	40	2.7	6.7	36-46
Total length	16	187	12.6	6.7	169-220

Total length: 8.1-11.5 mm

Remarks: This species appears not to have any close relatives in *Ocirrhoe*. It is more elongate than the other species in the genus and the convex arcuate outline of the female gonocoxae and the long rostrum are unique in the genus. In other features such as the relatively sparse punctation and the reflexed anterolateral margin of the pronotum which continues partly onto the lateral angle it is similar to most other species of *Ocirrhoe*. The tibiae are only flattened

apically but this is a characteristic also of the *unimaculata* group.

Ocirrhoe virescens is only known from eastern Queensland, specimens from Cape York Peninsula are larger and have proportionately longer antennae than those from southern Queensland.

Location of type:

Type (sex unknown as abdomen missing) of *virescens* Westwood, "New Holland", HOPE.

Specimens examined: The type and Queensland 1 ♀, Brisbane, 28.X.1913, H. Hacker; 1 ♀, Brisbane, 15.II.1916, H. Hacker; 1 ♂, Brisbane, 1.XII.1929, A. A. Girault QM; 1 ♀, Brisbane, 16.IV.1956, H. J. Lavery; 3 ♂, 1 ♀, Caloundra, 21.III.1972, G. B. Monteith; 2 ♂, Currumundi Lakes, Caloundra, 30.IX.1972, G. B. & S. R. Monteith; 1 ♂, Dunwich, 12.IV.1952, J. Davis; 1 ♂, Dunwich, 11.IV.1965, K. L. Lehmann; 1 ♂, 3 ♀, Dunwich, Stradbroke Island, 21-22.III.1970, G. B. Monteith; 1 ♀, Stradbroke Island, 4.III.1971, G. B. Monteith; 1 ♀, Cleveland, 25.VIII.1965, P. Saffigna; 1 ♀, Tibrogargan Creek, 10.IX.1957, F. A. Perkins; 1 ♀, Iron Range, Cape York Peninsula, 11-17.V.1968, G. Monteith; 1 ♀, F. W. Lake, 16 km (10 miles) north of Rocky River via Coen, 17.XII.1964, G. Monteith; 4 ♀, Telegraph Line Crossing, Jardine River, Cape York, 15-17.VI.1969, G. Monteith UQ; 3 ♀ ♀, Stradbroke Island, 27.IX.1906 & 3.X.1908, ex W. W. Froggatt collection ANIC; 1 ♀, Cairns, 23.I-1.II.1964, J. Sedlacek BISHOP.

Cuspicona Dallas, 1851

Cuspicona Dallas, 1851, p. 296. Stål, 1867, p. 521; 1876, p. 102. Lethierry & Severin, 1893, p. 180. Kirkaldy, 1909, p. xxx1.

Type species: *Rhynchocoris thoracica* Westwood, selected by Kirkaldy, 1909.

Description:

General appearance: Species usually greenish in life, rarely yellow brown or orange; in museum collections usually brown, orange or yellow. Strongly punctate above. Small to moderate sized, rather oval; anterolateral margins of pronotum nearly straight and diverging posteriorly with lateral angles acute, obtuse, or rounded; or anterolateral margins of pronotum nearly straight and diverging posteriorly with lateral angles produced into a blunt tooth; or anterolateral margins of pronotum straight anteriorly but posteriorly angling out to form in combination with the lateral angles a prominent laterally directed spine. Head and anterior part of pronotum inclined at an angle of about 30-45° to rest of body.

Head: Appearing elongate or not, in some species rather quadrate, in others strongly triangular but on measurement wider across eyes than long. Disc flattened or rather convex; lateral margins nearly straight though diverging posteriorly, or rather sinuate; apex rounded or rather acuminate, apices of juga and anteclypeus at about same level. Eyes rather triangular and

touching anterior margin of pronotum, ocelli conspicuous and placed nearer to inner margin of eyes than to centre line of head but on level of, or behind level of, hind margins of eyes. Antennifers short, antennae five segmented, first segment thicker than second and third, fourth and fifth same thickness as second and third or thicker, antennae not very long.

Pronotum: At least twice as wide across lateral angles as long, anterior margin truncate or concave behind eyes, then excavate behind collum, anterolateral angles not prominent or produced only into a minute spine or ridge. Anterolateral margins straight or very slightly concave in most species and diverging posteriorly but in some species about two thirds of the way back directed directly outwards to form with the fused lateral angles a prominent outwardly (and sometimes upwardly directed) spine; in species with straight or nearly straight anterolateral margins lateral angles spinous, acute, obtuse or truncate. Posterolateral margins usually concave, sometimes almost straight. Posterior angles obtuse, acute, or lobulately produced, posterior margin concave or nearly straight. Disc behind lateral angles in same plane as hind body, before level of lateral angles inclined downwards at about 30-45°.

Scutellum: Triangular, anteriorly not or only slightly raised, lateral margins somewhat concave medially, apex broadly rounded or acutely rounded. Frena extending about half to two thirds of length from base to apex.

Hemelytra: Coriaceous parts normally thickened. Corium with lateral margin concave basally or not, then broadly concave to acute or truncate apex, posterior margin straight or convex. Clavus narrow and strongly triangular. Membrane usually hyaline with veins substantially parallel apically.

Abdomen: Gently convex above, excavate apically in males and faintly so in females.

Laterotergites: Three to seven armed with a short acute spine on posterior exterior angle or this angle unarmed.

Underside: Head obtusely triangular in lateral view. Bucculae mostly lobulately produced anteriorly and then sinuate or straight, reaching to about middle of eyes; deeply sulcate between bucculae. Rostrum four segmented, first segment robust and generally reaching to at least base of bucculae, second segment frequently arched; rostrum reaching base of abdomen, sometimes as far as apex of fourth ventrite. Meso- and metasterna

with a robust keel projecting over whole prosternum or only over posterior portion of prosternum, latter broadly sulcate under or behind this keel. Legs normal, tibiae only flattened apically. Abdominal venter faintly V- or U-shaped in cross section as viewed from behind, third segment medially raised into a short triangular tubercle directed anteriorly, its apex fitting into a notch in the metasternal keel. Seventh ventrite in males shallowly excavated posteriorly and deeply excised in females. Pygophore with lateral portion of posterior margin produced or not, with posterior ventral margin deeply excised or not, with or without a small process. Aedeagus with phallosoma lightly sclerotized, conjunctiva produced forward usually into a pair of anterior processes, ventrally a pair of ventrally directed parallel bi-lobed median penial plates. Clasper strongly F-shaped, in one case Y-shaped. Female external genitalia flat or slightly convex.

General Remarks: Species placed in this genus have quite a varied appearance, some are strongly spined laterally on the pronotum, others have the pronotal lateral angles acute, obtuse or even truncate. Members of the genus can be confused with *Parocirrhoe* and *Avicenna* species but in these latter genera the posterior angles of the seventh laterotergites are strongly and angulately produced.

The shape of the posterior margin of the male pygophore varies considerably but is constant in each species and is a good character state to help distinguish species. The claspers are mostly rather F-shaped and in general related species have a similar shape. The aedeagus of the male also varies quite considerably but the "lappet" processes and the rather inverted Y-shaped ventrally directed medial penial plates of the "*Rhynchocoris*" group are present and typical in all species examined except *C. ooldeae* sp. nov. where the "lappet" processes are tubular and the medial penial plates lack the ventral concavity along their margin.

The female genitalia are not very distinctive except at the level of species group where the members of each group tend to show similar features in regards to the hind margin of the first gonocoxae.

I have divided the genus into three recognisable groups of species with one transitional group to handle two species apparently not very closely related to each other and which do not fit into any of the other three more characterisable groups. It is not unlikely that each of the

groups ought each to represent a separate subgenus of *Cuspicona* or even separate genera. It is premature, I consider, at this stage to do this until more aedeagi have been examined which requires a lot more material to be collected so that sufficient males can be spared for dissection. If the groups are later recognised as genera then the *thoracica* group will be *Cuspicona sensu stricto* and the other groupings new genera.

A short outline of the features of each group is given in the text before the treatment of the series of species which I have placed in each.

Some species formerly in *Cuspicona* have been, or will be, shifted to other genera and these changes in generic placement will be listed at the end of the second (and last) paper proposed on this revision of members of the "*Rhynchocoris*" Group from Australia and nearby island areas.

Key to *Cuspicona* species

1. (0) Lateral angles of pronotum produced, either as a longish spine like process or acutely produced into an incipient spine like process; if the latter and doubtful then the scutellum unicolorous 2
 - Lateral angles of the pronotum obtuse or very shortly rounded, not produced into an obvious spine or conspicuously acute 19
2. (1) Lateral angles of the pronotum produced into a substantial and outwardly directed spine 3
 - Lateral angles of the pronotum acute or produced only into an incipient spine 17
3. (2) Yellowish or greenish (in life) above; the only other markings may be pink or red tips to the spinous lateral angles of the pronotum, this pink may be produced anteriorly a little along the anterolateral margin of the pronotum and the anterior part of the exterior margin of the corium, some specimens also have a few black punctations near the lateral angles of the pronotum 4
 - Variouly coloured above but nearly always with the scutellum variously marked or the tips of the spinous lateral angles of the pronotum blackish; frequently black punctations on hind portion of pronotum 8
4. (3) A short line made up of several rows of black punctations on the anterolateral margins of the pronotum in front of the produced lateral angles (visible in part ventrally also) and more black punctations on the epipleura *exnigrosperpa* sp. nov.
 - Black punctations absent from dorsal surface 5

5. (4) Produced lateral angles of pronotum apically distinctly reddish 6
 Produced lateral angles of the pronotum concolorous, if reddish or pinkish then very pale and only at extreme apices 7
6. (5) Produced lateral angles of pronotum produced more than their width at base (as determined at the point where the outer margin of the corium terminates anteriorly)
rufispina Stål (Phillipines) and allies
 Produced lateral angles of the pronotum not produced more than their width (as measured above) but shorter
forticornis Breddin
7. (5) Smaller, lateral spines a little more acute; pygophore of male with hind margin reflexed as a vertical septum; hind margin of first gonocoxae of female strongly and rather trapezoidally produced posteriorly in its inner half *neocaledoniae* sp. nov.
 A little larger, spines not quite so acute; pygophore of male with posterior ventral margin not produced as a vertical septum but obliquely produced only medially and near outer edges with two black lobes; hind margin of first gonocoxae produced posteriorly but lobulately so
proxima Walker¹
8. (3) Pronotum anteriorly with two short longitudinal lines of coarse punctations, one on either side of the midline and beginning at the anterior margin *equisignata* sp. nov.
 Pronotum anteriorly without two short longitudinal lines of coarse punctations 9
9. (8) On pronotum between the strongly black punctate and produced lateral angles a conspicuous or dense transverse band of black punctations, seven or eight punctations wide 10
 Disc of pronotum not traversed posteriorly by a conspicuous wide band of dense black punctations though there may be some scattered black punctations, or a patch of black punctations, or a faint band, in this region 14
10. (9) Males with the head coarsely black punctate, sometimes almost wholly or with only a conspicuous patch of black punctations at the base of the head above; black punctations on the scutellum restricted to the apical third and arranged as a triangular patch on either side of the midline 11
 Head with only fine black punctations or no black punctations; black punctations on apical half of scutellum concentrated laterally or more evenly spread over apical region 12
11. (10) Black punctations on head restricted to about basal third in both sexes and absent from lateral margins; black punctations on scutellum reaching very near to apex; pygophore of male with posterior margin smoothly convex exteriorly grading into smoothly concave medially
apothoracica sp. nov.
 Black punctations covering most of dorsal surface of head in males, restricted usually to basal third in females but lateral margins black punctate; black punctations on scutellum ceasing well before apex; pygophore of male with posterior margin laterally rather truncate or even slightly concave, medially broadly concave but separated from lateral portions by a sharp angle
thoracica (Westwood)
12. (10) Black transverse punctate band on pronotum rather broad and diffuse; lateral spines on pronotum short in relationship to their basal width (15:15); underside of abdomen not laterally broadly green and medially luteous in life *phi* sp. nov. (in part)
 Black transverse punctate band on pronotum narrower and intense; lateral spines on pronotum longer than their basal width or not; underside of abdomen broadly green laterally and ventrally luteous in life 13
13. (12) Lateral spines on pronotum short in relation to their basal width (20:15) and about same length as posterolateral margins of pronotum; black transverse band on pronotum rather thin and medially sending a longitudinal branch several punctations wide towards apex; black punctations in apical third of scutellum fairly evenly distributed *angustizona* sp. nov.
 Lateral spines on pronotum longer in relation to their basal width (25-30:15) and longer than posterolateral margins; posterior transverse band of black punctations not sending forward a medial branch; black punctations in apical third of scutellum tending to be concentrated in a V
longispina sp. nov.
14. (9) Posterior angles of laterotergites III-VII black; lateral spines of pronotum not long in relation to their basal width; a medial broad longitudinal pale callus in anterior portion of pronotum; underside of pronotal spines punctate only apically; apical sixth of scutellum impunctate; abdomen apparently unicolorous below
procallosa sp. nov.
 Posterior angles of laterotergites III-VI not black, VII black tipped; if a medial longitudinal callus present anteriorly on pronotum then lateral spines strongly punctate beneath their whole length and punctations extending on to propleuron; apical sixth of scutellum punctate or not 15
15. (14) Abdomen laterally broadly green in life; ventrally broadly luteous 16
 Abdomen apparently unicolorous below, or with small red maculations
phi sp. nov. (in part)

¹ *Campla* Walker from Waigiu and adjacent areas is not included in this key but would run out with *C. proxima* from which it is distinguished by its very much longer rostrum and sparser pronotal punctation.

16. (15) Lateral spines of pronotum long in relation to their basal width (32:17), and equal to length of posterolateral margins (17:17); scutellum with dark punctations in apical sixth *cygniterrae* sp. nov.

Lateral spines of pronotum shorter in relation to their basal length (20-25:15-17) and longer than posterolateral margins (20-25:20); scutellum mainly glabrous in apical sixth *strenuella* Walker

17. (2) Suture on either side of anteclypeus blackish in posterior half and base of head somewhat clouded with dark punctations, sometimes basal region of pronotum also; lateral angles and some of anterolateral margin of pronotum pinkish *obesula* sp. nov.

Not marked as above 18

18. (17) Hind margin of pronotum strongly concave; anterolateral margins of pronotum black just before lateral angles; disc of head rather raised and head appearing comparatively long *cooperi* sp. nov.

Hind margin of pronotum truncate or only feebly concave; anterolateral margins of pronotum not black; head flat dorsally and not appearing unduly long
simplex Walker

19. (1) Largish, hind portion of pronotum with a prominent transverse fairly broad pink or red stripe between the lateral angles; outer margins of corium pink or red
carneola Van Duzee

Smaller, pronotum not marked as above, if a reddish or pinkish transverse stripe present then thin and very sinuous, or very pale and diffuse 20

20. (19) Head strongly triangular and apices of juga acute, sloping back obliquely, though slightly concavely, to eyes 23

Head not so strongly triangular and apices of juga oblique or rounded but distinct from lateral margins 21

21. (20) Lateral angles of pronotum rectangularly or obliquely acute, not broadly rounded; tibiae not sulcate or strongly flattened 22

Lateral angles of pronotum rounded; fore and middle tibiae flattened towards apices
privata Walker

22. (21) Apex of abdomen beneath infuscated, at least in males; second and third antennal segments subequal, fifth about 6 per cent longer than fourth *norfolcensis* sp. nov.

Apex of abdomen beneath not infuscated, at least in females; second antennal segment about 25 per cent longer than third and fifth about 20 per cent longer than fourth
cheesmanae sp. nov.

23. (20) Dorsal surface maculated with black; ground colour in museum specimens yellowish or orange; hind margin of male pygophore medially smoothly concavely excavate, laterally broadly convex *intacta* Walker

Dorsal surface not maculated with black; hind margin of male genitalia trapeziformly excavate medially or with a prominent tooth on either side of the middle 24

24. (23) Pygophore with apical margin deeply excavate medially, this excavation bordered on each side by a conspicuous tooth; exterior to this convexly rounded; first gonocoxae of female with hind margins sinuated; third antennal segment very short in relation to second (11:20)

eremophilae sp. nov.

Pygophore with apical margin medially trapeziformly excavate; depressed in front of excavate margin; laterally to this concave; hind margins of female gonocoxae transversely truncate; third antennal segment longer in relation to second (16:21)

ooldeae sp. nov.

Intacta Group

The *intacta* group of species comprises four species occurring mainly in the semiarid and arid regions of Australia. They do not penetrate in the wetter south western, south eastern or north eastern portions of the continent or into Tasmania. The four species have a similar facies, the head appears very long in relation to its width but is actually a little shorter than its width across the eyes. The lateral margins of the head and the juga laterally are indistinguishable and run forward from the eyes distinctly converging, although the actual profile of this margin may be a little convex. Only one species (*intacta* Walker) has black spots (although frequently absent) but these are widely dispersed and scattered fairly evenly over the whole coriaceous parts of the dorsal surface. The lateral angle of the pronotum is truncate or feebly rounded except on *cooperi* sp. nov. where it is acute.

The first gonocoxae of the female have the posterior margin rather sinuate or transversely truncate (*ooldeae* sp. nov.).

Host plant records for the group include species of *Eremophila* and *Melaleuca*.

Cuspicona intacta Walker, 1868

Figs. 21, 23 A-B, 25 A.

Cuspicona intacta Walker, 1868, p. 571; Kirkaldy 1909, p. 239 (as *incertae sedis*).

Description:

General appearance: Museum specimens brownish yellow or orange, often with widely separated small black maculae on the dorsal surface. First two antennal segments and base

of third yellow, apical portion of third, and fourth and fifth reddish brown. Eyes and ocelli blackish.

Head: Appearing strongly elongate, but actually as wide or a little wider across eyes than long; triangular, medially rather raised, particularly towards base, lateral margins almost straight. Coarsely and rugulose punctate.

Pronotum: Concolorous, frequently with small scattered black spots, densely punctate and appearing rather rugulose, calli glabrous. No trace of a medial longitudinal line. Anterior margin obliquely truncate behind eyes and rather trapeziformly excavate behind collum, anterolateral angles not prominent. Anterolateral margins narrowly obtuse, nearly straight and diverging posteriorly. Lateral angles shortly and obliquely truncate, posterolateral margins angulately concave, posterior margin broadly concave.

Scutellum: Concolorous, frequently with small scattered black points, strongly punctate, rather convex basally and flat apically. Lateral margins gently convex in basal 4/7 then straight and converging gently to narrowly rounded apex. Frena reaching to 4/7 of length.

Hemelytra: Coriaceous parts concolorous, often with scattered small black spots, densely punctate. Exterior margins of coria faintly concave basally and then faintly convex to shortly rounded apical angle, reaching about middle of abdominal segment VI, this and most anterior segments narrowly exposed. Posterior margin of corium straight, inner angle very broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous, sometimes coarsely punctate with brown.

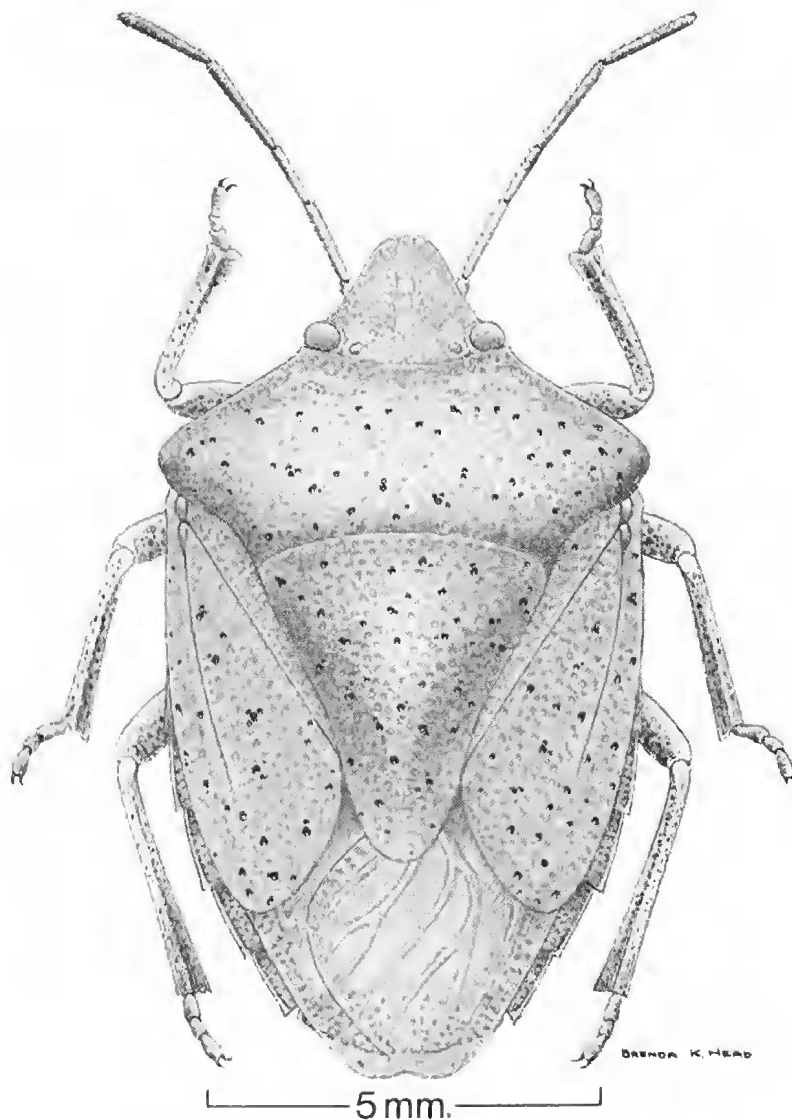


Fig. 21. Dorsal aspect of *Cuspicona intacta* Walker.

Laterotergites: Concolorous, sometimes coarsely punctate with brown; posterior exterior angles produced into a spine which may be minutely black tipped.

Underside: Concolorous but paler along mid-line, coarsely punctate nearly all over, including the evaporative areas, these punctations and also spots on the legs sometimes brown. Rostrum ventrally and extreme apex black.

Bucculae low and sinuated, reaching about middle of an eye, anteriorly produced into an elongate lobular process. Rostral segment I robust, reaching to base of bucculae, II compressed and arched and reaching onto mesosternum, III to about hind coxae and IV onto abdominal ventrite IV. Ratio of antennal seg-

ments (♂) 11 : 21 : 15 : 25 : 27. All pleura coarsely punctate, punctations sparser on evaporative areas. Metasternal-mesosternal keels a little higher medially than anteriorly, reaching over prosternum but not to its apex, anteriorly rounded and directed to the left in ventral view. Legs normal with sparse pilosity, femora and tibiae sometimes maculated with brown. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 23 A, hind margin of pygophore medially semi-circularly excavate with a slight impression laterally where margin is mainly convex. Clasper Fig 25 A, strongly F-shaped the upper ramus ascending rather steeply. Apex of female abdomen Fig. 23 B, hind margins of first gonocoxae rather angulately sinuated.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	8	43	2.4	5.6	39-45
Head width	8	43	1.8	4.2	40-45
Antennal segment I	16	11	0.7	6.8	9-12
Antennal segment II	16	21	0.7	3.1	20-22
Antennal segment III	16	15	1.2	8.0	13-17
Antennal segment IV	15	25	0.7	2.8	24-26
Antennal segment V	13	27	1.6	6.0	25-30
Pronotum width	8	101	3.0	3.0	96-105
Pronotum length	8	39	4.4	11.4	31-42
Total length	8	187	9.2	4.9	175-200

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	13	46	2.1	4.6	43-50
Head width	13	47	1.9	4.0	44-50
Antennal segment I	24	11	0.7	6.2	10-12
Antennal segment II	22	23	1.8	7.8	21-26
Antennal segment III	22	15	1.2	7.9	14-18
Antennal segment IV	19	26	1.6	6.4	23-28
Antennal segment V	10	27	1.5	5.5	25-29
Pronotum width	13	114	8.6	7.5	99-129
Pronotum length	13	43	5.1	11.9	34-50
Total length	13	210	11.9	5.7	195-230

Total length: 9.1-12.0 mm

Remarks: There is little doubt that this is the species described as *Cuspicona intacta* by Walker. The sternal keels are mentioned by Walker so *intacta* is a member of the *Rhynchocoris* group. It is also from his description clearly not a member of a genus with longly produced lateral angles which eliminates *Biprorulus*, *Vitellus*, *Avicenna* and a number of others nor of a genus with the posterior angles of the seventh laterotergites strongly produced which eliminates still more, or of those genera which are shiny with only sparse and coarse punctations above. This leaves only *Ocirrhoe*, part of *Cuspicona* and

Everardia to which it could belong. The pronotal shape is wrong for *Everardia* and no species of *Ocirrhoe* has a "long" head. Four species of *Cuspicona* do have the head appearing conspicuously long in relation to its width and all four have acute or subacute lateral angles on the pronotum and the third antennal segment shorter than the second, three additional character states mentioned by Walker. Of these four this is the only species which may have black spots on the dorsum. Walker mentions them as only occurring along the hind margin of the pronotum whereas these examples which are spotted which

I have seen tend to have them scattered over the whole pronotum, scutellum and corium, though frequently more concentrated in the posterior regions of the pronotum.

Cuspicona intacta has a wide distribution in the drier regions extending from Arnhem Land in the north to near Adelaide in the south and from Cunnamulla in Queensland and Nyngan in New South Wales in to the east to the area of Carnarvon in the west of Western Australia. The only recorded food plant is *Eremophila freelingii* FvM.

Location of type:

Supposed to be in the NM but apparently lost. The sex was not stated and the locality simply given as "Australia."

Specimens examined: Queensland 1 ♀, Cunnamulla, 12.XII.1938, N. Geary AM. New South Wales 1 ♂, Nyngan District, 1-9.II.1960, T. E. Woodward UQ. South Australia 1 ♀, Tea Tree Gully, 27.XII.1967, C. van Dijk; 1 ♀, Derna Pass, 19 km. south of Copley, 25.X.1969, on *Eremophila freelingii* FvM, A. N. McFarland; 4 ♂, 2 ♀, Arkaroola Homestead, 28.X.1969, on *Eremophila freelingii* FvM, A. N. McFarland; 2 ♂, 4 ♀, same data but 1.I.1969; 1 ♀, Mt. Davies, Oct.-Nov. 1956, at light, S. B. Warne SAM. Western Australia 1 ♂, Reid, 17.X.1968, Britton, Upton and Balderson; 1 ♀, 107 miles (170 km) SSE of Carnarvon, 21.IV.1968, I.F.B. Common and M. S. Upton ANIC. Northern Territory 1 ♂, Arnhem Land (interior), Dr. H. Basedow SAM; 1 ♀, 17 km. (11 miles) north of Alice Springs, 825 m., 28.X.1962, collected at ultraviolet (black) light 15 watt, E. S. Ross and D. Q. Cavagnaro CAS.

***Cuspicona ooldeae* sp. nov.**

Figs. 22, 23 C-D, 25 B-C

Description:

General appearance: Museum specimens pale yellow, frequently with a reddish tinge; strongly punctate above; antennae yellow or sometimes pale reddish; eyes greyish purple or concolorous, ocelli red.

Head: Appearing strongly elongate but actually a little wider across eyes than long; triangular, medially rather raised, particularly towards base. Lateral margins somewhat concave in front of eyes. Coarsely and rugulose punctate except at very base. Eyes greyish to concolorous, ocelli red.

Pronotum: Concolorous, densely punctate and appearing rather rugulose, punctations sometimes faintly reddish; calli paler and glabrous. Medially a faint trace of a longitudinally raised line. Anterior margin obliquely concave behind eyes and rather trapeziformly concave behind collum, anterolateral angles prominent as a small tooth. Anterolateral margins marginate, nearly straight and diverging posteriorly. Lateral angles narrowly marked with pink or orange, obliquely truncate, posterolateral margins angulately concave, posterior margin broadly concave.

Scutellum: Concolorous, strongly punctate, rather convex basally and flat apically. Lateral margins gently convex in basal 5/8 then straight and converging to narrowly rounded apex. Frena reaching about 5/8 length.

Hemelytra: Coriaceous parts concolorous and densely punctate. Exterior margins of coria faintly concave basally and then faintly convex

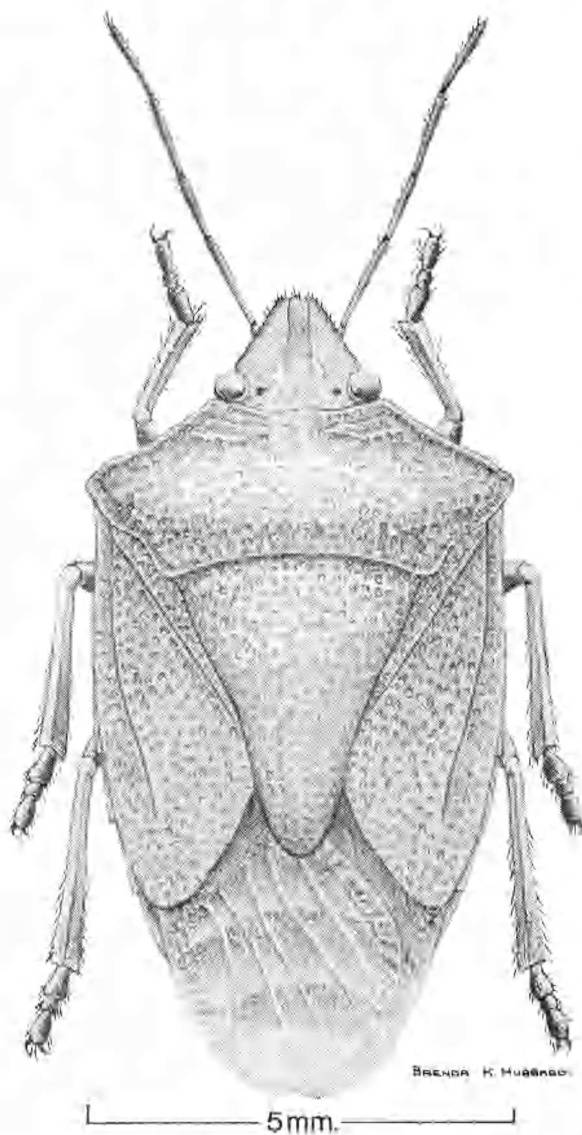


Fig. 22. Dorsal aspect of *Cuspicona ooldeae* sp. nov.

to broadly rounded apical angle, reaching about middle of abdominal segment V, this and most anterior segments narrowly exposed. Posterior margin of corium straight, inner angle very broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous.

Laterotergites: Concolorous, sparsely punctate, posterior exterior angles produced into a spine which on the medial segments may be minutely black tipped.

Underside: Concolorous; antennal segments II-V usually reddish yellow, underside of lateral angle of pronotum narrowly orange or reddish; punctations on underside frequently faintly reddish, sides of abdomen sometimes spattered with reddish points or fine punctations. Underside and extreme apex of rostrum black.

Bucculae low and strongly sinuated, reaching about middle of eye, anteriorly produced into a low triangular process. Rostral segment I robust, reaching to base of bucculae, II compressed and arched and reaching beyond fore coxae, III to just behind mid coxae and IV to about middle

of 3rd abdominal segment. Ratio of antennal segments ♂ 10 : 21 : 16 : 21 : 21. Propleura coarsely punctate all over, mesopleura mostly glabrous with only a few scattered punctations, metapleura mainly glabrous anteriorly with but a few punctations, more strongly punctate along hind margin. Metasternal-mesossternal keels a little higher medially than anteriorly, reaching over prosternum but not to its apex, anteriorly shortly truncate and directed a little to left in ventral view. Legs normal but conspicuously finely spinose, tibiae flattened apically. Abdomen broadly U-shaped in posterior view. Apex of male abdomen Fig. 23 C, hind margin of pygophore rather trapeziformly excavate, laterally to this broadly rounded. Clasper Fig. 25 C, strongly F-shaped, the upper ramus not ascending so steeply as in *intacta* or *eremophillae*. Aedeagus Fig. 25 B, phallosoma short and honey-coloured, lappet processes in form of two tubules, medial penial plates rather hatchet shaped. Apex of female abdomen Fig. 23 D, hind margins of first gonocoxae transversely straight in contrast to the more sinuated hind margin of allied species.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	7	38	1.7	4.5	36-40
Head width	7	40	1.6	4.1	38-43
Antennal segment I	10	10	0.7	7.3	8-10
Antennal segment II	9	21	1.4	6.8	19-23
Antennal segment III	9	16	0.5	3.4	15-16
Antennal segment IV	8	21	1.0	4.9	20-23
Antennal segment V	3	21	—	—	20-21
Pronotum width	7	94	4.2	4.4	90-102
Pronotum length	7	32	2.9	9.1	30-36
Total length	7	181	4.8	2.6	175-190

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	14	40	2.0	4.9	37-43
Head width	14	41	1.2	3.0	39-43
Antennal segment I	20	9	0.4	4.5	9-10
Antennal segment II	18	22	1.3	5.8	20-25
Antennal segment III	18	15	1.1	7.2	13-18
Antennal segment IV	16	20	0.6	3.0	20-22
Antennal segment V	13	20	0.6	3.0	20-22
Pronotum width	14	100	3.5	3.5	95-106
Pronotum length	14	34	4.7	13.7	27-43
Total length	13	189	8.4	4.5	178-200

Total length: 9.1-10.4 mm.

Remarks: *Cuspicona voldeae* differs from *C. intacta* by not having black spots on the dorsum, by the faintly trapeziform incision of the hind margin of the pygophore, by the

transverse depression on the disc of the pygophore below and by the transverse straight hind margin of the female first gonocoxae. The species is found in the arid centre of the continent

ranging from the Flinders Ranges westwards to well into Western Australia and northward to near Alice Springs.

Location of types:

Holotypes ♂ (Reg. No. I20,719), Farina, South Australia, at light in creek bed, 27.X.1970, G. F. Gross & E. Matthews; allotype ♀ (Reg. No. I20,720), Mambray Creek (crossing on) Port Augusta Road, South Australia, under (bark of) *Eucalyptus camaldulensis* Dehnh, 13.XI.1970, G. F. Gross and E. Matthews SAM; PARATYPES: South Australia 1 ♀ (Reg. No. I20,721, hill near Victory Well, Everard Park Station, 8.XI.1970, T. F. Houston; 1 ♂, Madigan Gulf, Lake Eyre, South Australia, at light, 5.XI.1955, E. T. Giles; 6 ♂, 9 ♀ (Reg. Nos. 20,723-38), Ooldea, South Australia, A. M. Lea SAM; 1 ♀, Emily Gap, 9 km (6 miles) E. of Alice Springs,

Northern Territory, 17.II.1966, Britton, Upton & McInnes ANIC; 1 paratype ♂, 18 km (11 miles) north of Alice Springs, Northern Territory, 625 m, 28.X.1962, collected by 15w ultraviolet (black) light, E. S. Ross & D. Q. Cavagnaro CAS; 1 ♀, Meekatharra, Western Australia 3.IX.1971, F. H. Uther Baker WAM.

Specimens examined: The types only.

***Cuspicona eremophilae* sp. nov.**

Fig. 23 E-F, 24, 25 D

Description:

General appearance: In life bluish-green mottled with white or luteous, in museum specimens yellow or brownish yellow; terminal half of antennae light brown, eyes purplish red or brown. Densely and finely punctate.

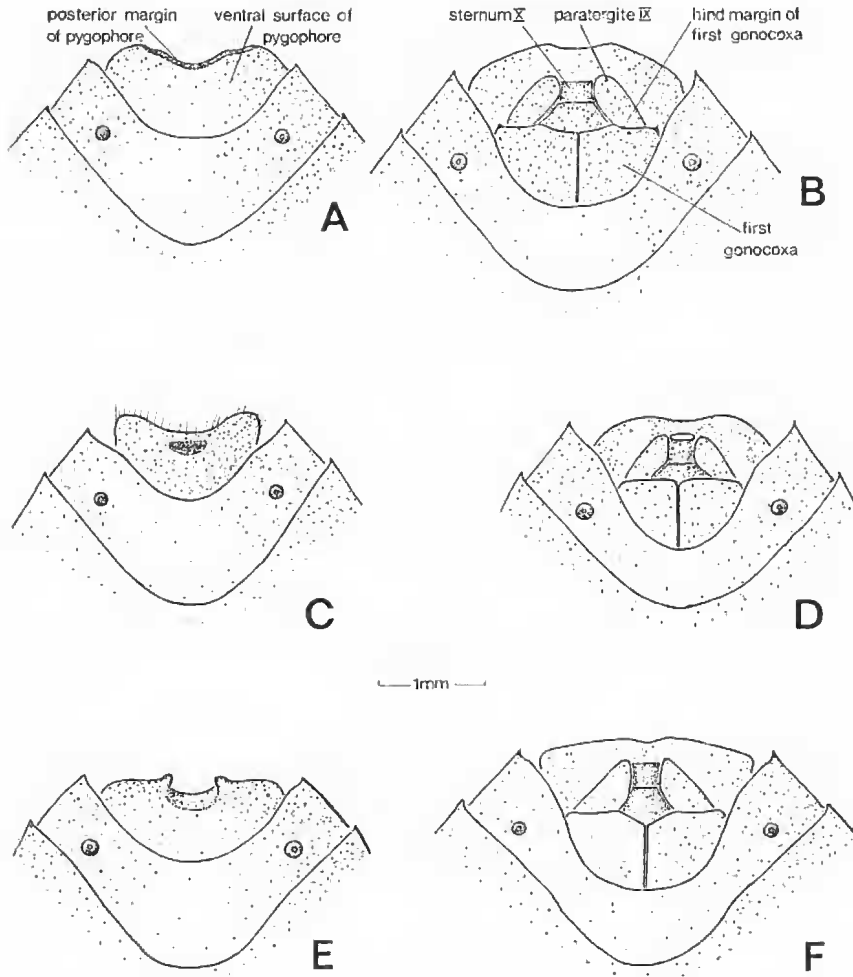


Fig. 23. *Cuspicona intacta* Walker, *Cuspicona ooldea* sp. nov. *Cuspicona eremophilae* sp. nov. A-B. *Cuspicona intacta*. A. ventral aspect of male abdomen. B. ventral view of female abdomen. C-D. *Cuspicona ooldea* sp. nov. C. ventral aspect of male abdomen. D. ventral aspect of female abdomen. E-F. *Cuspicona eremophilae*. E. ventral aspect of male abdomen. F. ventral aspect of female abdomen.

Head: Appearing elongate but actually wider than long; strongly triangular, medially rather raised, particularly towards base. Densely punctate, appearing rather rugulose, concolorous. Eyes and ocelli purplish-red or brown.

Pronotum: Concolorous, densely punctate and appearing rather rugulose, calli paler and glabrous. Medially a trace of a longitudinal raised line. Anterior margin concavely oblique behind eyes and broadly concave behind collum, anterolateral angles prominent as a small ridge. Anterolateral margins marginate, nearly straight and diverging posteriorly. Lateral angles rather truncate, posterolateral margins conspicuously concave, posterior margin broadly concave.

Scutellum: Concolorous, strongly punctate and rather flat. Lateral margins faintly convex in basal 4/7 then straight and converging slightly to narrowly rounded apex. Frena reaching to about 4/7 length.

Hemelytra: Coriaceous parts concolorous and densely punctate. Exterior margins of coria faintly concave basally then rather sinuately convex and converging to expose abdominal segments III-VII. Apical angle of corium narrowly rounded, posterior margin straight exteriorly, inner angle very broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous.

Laterotergites: Concolorous, coarsely punctate. Posterior exterior angles nearly rectangular.

Underside: Concolorous; apex of third antennal segment, fourth antennal segment (except at base) and fifth light brown. Stylets and extreme apex of rostrum black.

Bucculae low and strongly sinuated, reaching base of head, anteriorly not produced into a

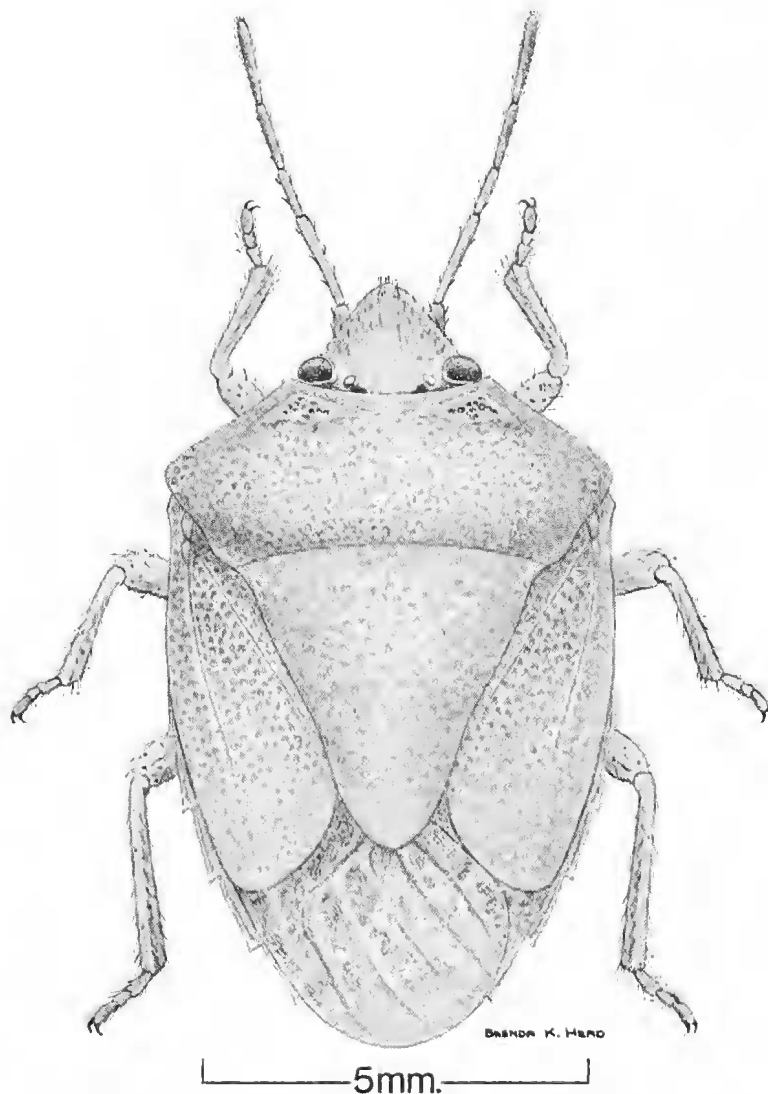


Fig. 24. Dorsal aspect of *Cuspicona eremophilae* sp. nov.

lobulate process. Head laterally coarsely punctate. Rostral segment I robust, reaching almost to base of head, segment II more compressed and arched, surpassing fore coxae, III surpassing mid coxae and IV reaches onto visible base of abdomen. Ratio of antennal segments ♂, 9:21:11:20:22. All pleura coarsely punctate except on evaporative area. Metasternal-mesosternal keels higher medially than narrowly rounded, deflected to left in ventral view. Legs normal but conspicuously pilose, tibiae slightly

flattened apically. Abdomen broadly V-shaped in posterior view. Apex of male abdomen Fig. 23 E, hind margin of pygophore semicircularly concavely excised medially, laterally on either side of incision a strong triangular "tooth" and exteriorly to this arcuately rounded. Clasper Fig. 25 D, vaguely F-shaped, with the upper ramus ascending at an oblique angle. Apex of female abdomen Fig. 23 F, hind margins of first gonocoxae gently angulately convex.

Dimensions—

MALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	8	36	1.4	3.9	34-38
Head width	8	41	1.6	3.9	39-43
Antennal segment I	16	9	0.6	7.2	8-10
Antennal segment II	16	21	1.0	4.7	19-23
Antennal segment III	16	11	0.8	7.5	10-13
Antennal segment IV	12	20	1.4	7.4	17-21
Antennal segment V	9	21	1.3	6.2	20-23
Pronotum width	8	93	4.6	5.0	87-100
Pronotum length	8	30	3.5	11.6	24-35
Total length	8	160	6.6	4.1	155-175

FEMALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	11	39	1.5	3.9	36-41
Head width	11	44	1.0	2.4	42-45
Antennal segment I	21	9	0.6	6.5	8-10
Antennal segment II	21	22	1.3	5.9	19-24
Antennal segment III	21	11	0.9	8.4	10-13
Antennal segment IV	20	19	1.0	5.1	17-20
Antennal segment V	17	20	0.6	3.0	19-21
Pronotum width	11	101	2.5	2.5	96-104
Pronotum length	11	34	1.8	5.3	31-37
Total length	11	180	6.3	3.5	173-190

Total length. 8.1-9.9 mm

Remarks: *C. eremophilae* is rather similar to *C. ooldeae* but differs in the much shorter third antennal segment and in lacking the pink marking on or just before the lateral angles.

C. eremophilae is a true eremian species occurring in the north of South Australia, southern half of the Northern Territory and western Queensland, but with a single specimen collected on the outskirts of Adelaide.

A single female specimen in the British Museum (Nat. Hist.) from Alexandra in the Northern Territory, and well outside the range of distribution for *eremophilae* as indicated by other specimens, has the same rather angulate hind margin of the first gonocoxae as has *eremophilae* but has the third antennal segment longer than the second. It likely represents a fifth species of the *intacta* group but is being passed over in this present revision due to its poor condition.

Location of types:

South Australia Holotype ♂ (Reg. No. 120,700), allotype ♀ (Reg. No. 120,701), 4 paratype ♂ (Reg. No. 120,702-5), 5 paratype ♀ (Reg. No. 120,706-10), Arkaroola homestead, 1.XI.1969, on *Eremophila freelingii* FvM, A. N. McFarland; 1 paratype ♂ (Reg. No. 120,711), 2 paratype ♀ ♀ (Reg. Nos. 120,712-3), same data and collector but on 28.X.1969; 1 paratype ♀ (Reg. No. 120,717), Aroona Dam south of Copley, 3.XI.1969, at ultraviolet light, A. N. McFarland; 1 paratype ♂ (Reg. No. 120,714), near Victory Well, Everard Park Station, 30.X.1970, by beating trees and shrubs, G. F. Gross & E. G. Matthews; 1 paratype ♂ (Reg. No. 120,715), Mt. Eyre west of Hookina, 10.V.1956, at light, G. F. Gross; 1 paratype ♀ (Reg. No. 120,716), Coopers Creek, 1916 Museum Expedition to Central Australia; 1 paratype ♀ (Reg.

No. I20,790), Athelstone, 15.XI.1973, at light, M. L. Szent-Ivany SAM; Queensland 1 paratype ♀, Cunnamulla, Queensland, 8-19.X.194?, A. J. Turner QM; 1 paratype ♀, Thargomindah, Apr. 1941, N. Geary AM; Northern Territory 1 paratype ♀, 150 km south of Alice Springs, Sept. 1972, Dimits NM; 1 paratype ♀, Standley Chasm, 40 km (26 miles) west of Alice Springs, 9.II.1966, Britton, Upton & McInnes ANIC. 1 paratype ♂, Ooratipra, 275 m., 31.X.1962,

E. S. Ross & D. Q. Cavagnaro; 1 paratype ♂, 18 km (11 miles) northeast of Yamba near Alice Springs, 625 m., 29.X.1962, E. S. Ross & D. Q. Cavagnaro; 1 paratype ♀, 18 km (11 miles) northeast of Alice Springs, 28.X.1962, collected by 15w (ultraviolet) light, E. S. Ross & D. Q. Cavagnaro CAS.

Specimens examined: The types and South Australia 1? (abdomen missing), Lake Callabonna, A. Zietz; 1 ♀, Ooldea, A. M. Lea SAM.

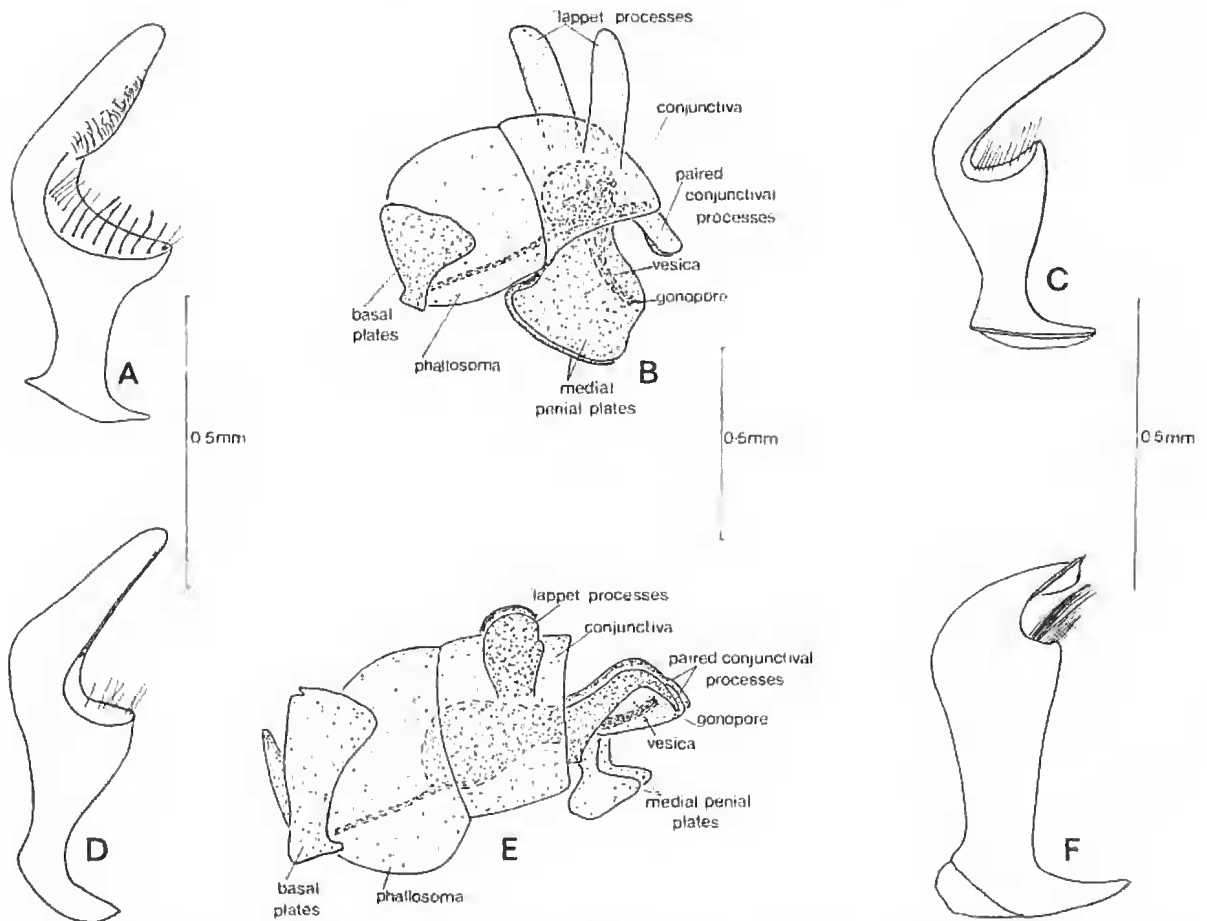


Fig. 25. *Cuspicona intacta* Walker, *Cuspicona ooldeae* sp. nov., *Cuspicona eremophilae* sp. nov., *Cuspicona carneola* Van Duzee, A. *Cuspicona intacta*—clasper. B-C. *Cuspicona ooldeae*, B. left-hand side aspect of aedeagus. C. Clasper. D. *Cuspicona eremophilae*—clasper. E-F. *Cuspicona carneola*. E. left-hand side aspect of aedeagus. F. clasper.

Cuspicona cooperi sp. nov.

Figs. 26, 28 A-B

Description:

General appearance: Ground colour yellow or brownish yellow in museum specimens with terminal half of antennae brown and anterolateral margins of pronotum just in front of lateral angles narrowly black. Eyes purplish. Sparsely and finely punctate.

Head: Appearing elongate but actually a little wider than long; strongly triangular,

medially rather raised particularly towards base. Finely punctulate, concolorous. Eyes and ocelli purplish or purplish red.

Pronotum: Concolorous and densely and rather finely punctate, punctations discrete, calli paler and glabrous. Medially a faint raised longitudinal line. Anterior margin concavely oblique behind eyes and broadly concave behind collum, anterolateral angles slightly prominent. Anterolateral margin thin but obtuse, shallowly concave and diverging to region of anterolateral

angles, black just before latter. Lateral angles rectangularly acute. Posterolateral margins conspicuously concave, posterior margin broadly concave.

Scutellum: Concolorous and rather flat with fine discrete punctations. Lateral margins faintly convex in basal $\frac{1}{4}$ then straight and converging to narrowly rounded apex. Frena reaching to about $\frac{1}{4}$ length.

Hemelytra: Coriaceous parts concolorous and densely punctate. Exterior margins of coria faintly concave basally then slightly convex and gradually converging so that 4-7th segments of abdomen are only narrowly visible. Apical angle of corium nearly rectangular, posterior margin straight, inner angle very broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous.

Laterotergites: Concolorous except apices of posterior exterior angles which are black; sparsely punctulate.

Underside: Concolorous; apical half of third and fourth and fifth antennal segments brownish, stylets of, and apex of, rostrum black.

Bucculae low and strongly sinuated, reaching to about middle of eye, anteriorly formed into a rounded lobe which is not particularly obtrusive. Rostral segment I robust, reaching to just behind base of antennifer and not quite to base of bucculae, segment II more compressed and arched, reaching just behind fore coxae, III to base of mid coxae and IV to base of hind coxae. Ratio of antennal segments δ 9:18:15:23:27. All pleura rather sparsely punctate but evaporative areas impunctate. Metasternal-mesosternal keels higher anteriorly than posteriorly, reaching over prosternum almost to its apex, anteriorly broadly rounded, deflected to left in ventral view. Femora normal, tibiae slightly flattened apically. Abdomen strongly V-shaped in posterior view. Apex of male

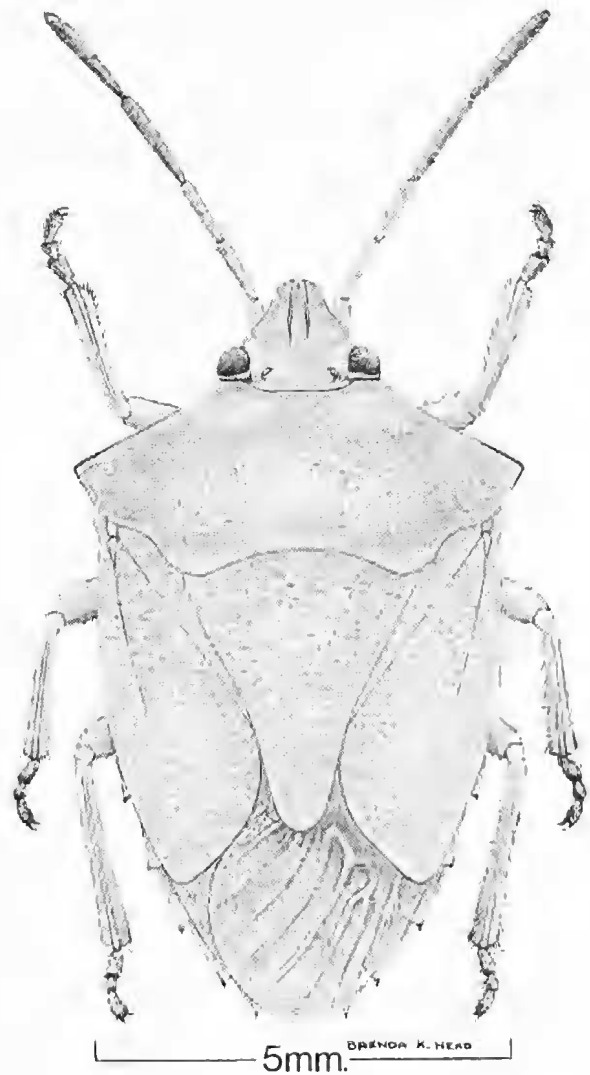


Fig. 26. Dorsal aspect of *Cuspicon cooperi* sp. nov.

abdomen Fig. 28 A, hind margin of pygophore rather angularly incised medially with a small convex margin at base of "notch", laterally on either side of medial incision a small tooth and exteriorly to this strongly rounded. Apex of female abdomen Fig. 28 B, hind margins of first gonocoxae transverse and slightly concave along their central portions, turning anteriorad both interiorly and exteriorly.

Dimensions—

MALES

Parameter	Holotype	Stockholm Paratype	RM Paratype
Head length	40	39	37
Head width	41	41	42
Antennal segment I	10, 9	9, —	9, 9
Antennal segment II	18, 17	19, —	18, 17
Antennal segment III	16, 16	15, —	15, 15
Antennal segment IV	25, 25	23, —	22, 23
Antennal segment V	27, —	—, —	28, —
Pronotum width	105	110	109
Pronotum length	39	40	40
Total length	175	189	194

Dimensions—

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	8	41	2.5	6.0	37-45
Head width	8	45	2.4	5.4	40-47
Antennal segment I	14	10	0.3	3.0	9-10
Antennal segment II	14	19	1.3	6.7	17-21
Antennal segment III	14	15	0.8	5.5	14-16
Antennal segment IV	9	22	1.2	5.5	21-24
Antennal segment V	3	25	—	—	24-26
Pronotum width	8	119	8.1	6.9	102-127
Pronotum length	8	44	4.1	9.3	38-50
Total length	8	207	14.6	7.1	180-225

Total length: 9.1-11.7 mm.

Remarks: *C. cooperi* is closely related to *C. eremophilae* in the shape of the male pygophore, it is however distinguished from that species by its longer third antennal segment, much sparser punctation and in not developing the mottled rugulose appearance of *eremophilae*. From *eremophilae* and other species in the *intacta* group it is distinguished by the rather rectangular lateral angles of the pronotum and the short black marginal line on the anterolateral margins just before the lateral angles.

The present known distribution of the species is over an elongate elliptical area stretching from Rockhampton in Queensland to the southern Flinders Ranges in South Australia. The species is named after the late H. M. Cooper who gave so much of his time in a voluntary capacity to the South Australian Museum and who collected the holotype specimen.

Location of types:

Holotype ♂ (Reg. No. 120,698), Mt. Remarkable, South Australia, 600-700 m (1800-2200ft.), 12.V.1968, H. M. Cooper SAM; allotype ♀, 1 paratype ♂, 3 paratype ♀, Rockhampton, Queensland STOCKHOLM; 1 paratype ♂ (Reg. No. 120,699), 18 km north of Broken Hill, New South Wales, by sweeping, 8.III.1963, K. Dansie SAM; 2 paratype ♀, unlocalised, Distant collection 1911-383 BM; 1 paratype ♂, 1 paratype ♀, Peak-Downs, Queensland; 1 paratype ♀ Rockhampton, Queensland RM.

Specimens examined: The types only.

UNGROUPED

The next two species of *Cuspicona* appear not to have any close relatives in the genus nor are they apparently closely related to each other. They lack the strongly triangular heads of the *intacta* group but have not developed the strongly produced spinose lateral angles of the pronotum of the *thoracica* and *simplex* groups.

Their position in the sequence of groups appears to be somewhere in between the *intacta* and *thoracica* groups.

Cuspicona carneola Van Duzee, 1905

Figs. 25 E-F, 27, 28 C-D

Cuspicona carneola Van Duzee, 1905: 207; pl. 8 fig. 9.

Description:

General appearance: Ground colour yellow or brownish-yellow in museum specimens; lateral angles of pronotum and a broad band across scutellum, apex of scutellum, lateral margins of corium (broadly) and laterotergites (at least exteriorly) bright carmine red, occasionally only pinkish. Lateral angles of pronotum angulately truncate.

Head: Appearing large, broad and flat, transversely rugulose, concolorous. Frequently a pinkish suffusion along lateral margins in front of eyes. Eyes and ocelli reddish-brown. Lateral margins very gently angulately concave.

Pronotum: In anterior half and along posterior margin concolorous; across disc from, and including, lateral angle to lateral angle a broad carmine red (or in some specimens pink) stripe. Punctations on disc reddish or blackish, calli glabrous. Anterior margin oblique behind eyes and broadly concave behind collum, anterolateral angles somewhat prominent. Anterolateral margins thickened, straight and obliquely diverging to region of lateral angles. Latter obliquely truncate. Posterolateral margins strongly and angulately incised, a convex lobe formed between each and shallowly concave posterior margin.

Scutellum: Concolorous with apex broadly carmine red, disc covered with coarse reddish or brown punctations and flattish. At base of each lateral margin a deep concolorous fovea visible

if pronotum has moved a little forward. Lateral margins broadly convex in basal 5/9, then straight and slightly converging to very broadly rounded apex. Frena reaching to about 5/9 length.

Hemelytra: Coriaceous parts concolorous interiorly but outer margin of corium broadly carmine red or pink, coarsely and concolorously punctate. Exterior margins of coria straight basally then gradually converging so that laterotergites are exposed in the more distal region. Apical angle of corium fairly acute, posterior margin straight, inner angle very broadly rounded. Clavus elongate triangular. Membrane fumose hyaline with veins browner, near inner base of membrane a large piceous spot.

Abdomen: Mostly concolorous but black areas around margins of scutellum and along posterior margin of genitalia, sometimes also along posterior margin of segment VII. Behind apex of scutellum frequently carmine red, the extent of this red variable.

Laterotergites: Concolorous interiorly and carmine red or pink exteriorly. Posterior exterior angles produced into a small black tipped spine, sometimes whole exterior margin narrowly black.

Underside: Yellowish. Apical half of third antennal segment and antennal segments III-IV, tibiae and tarsomeres sometimes darker, brown or reddish. Underside of rostrum and very apex, and sometimes lateral margin of abdomen and posterior margin of female genitalia, very narrowly black. Margins of head basally, lateral margins of pronotum, exterior margin of epipleuron, lateral margin of abdomen (latter sometimes only submarginally, extreme margin then black) most of pygophore and female genitalia behind first gonocoxae usually carmine red or pinkish, sometimes however concolorous.

Bucculae low and sinuate, reaching to about middle of eye, produced into a blunt triangular lobe anteriorly. Rostral segment I robust, reaching to base of bucculae, II fairly thick and arched, reaching to just behind fore coxae, III to mid coxae, IV to about middle of abdominal ventrite III. Ratio of antennal segments (δ) I-V 11:19:21:27:29. Propleura red or brown punctate except on proepisternum and proepimeron, exteriorly to these two latter a raised though sparsely punctate area. Mesopleuron punctate anteroventrally and posteriorly, meta-pleuron posteriorly and sometimes anteriorly also. Metasternal-mesosternal keels higher anteriorly than posteriorly, reaching over prosternum to its

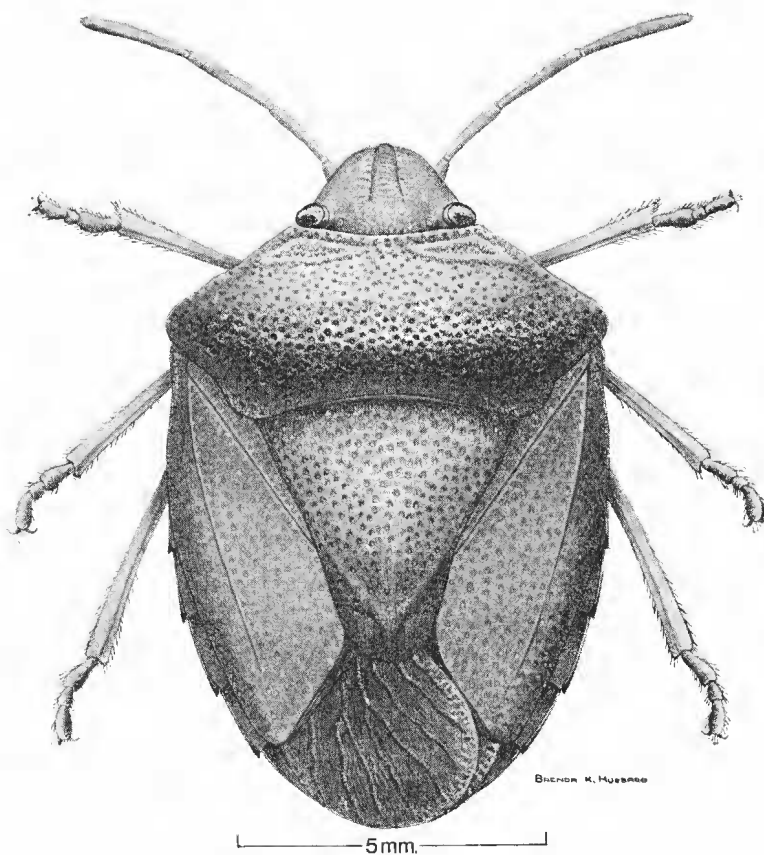


Fig. 27. Dorsal aspect of *Cuspicona carneola* Van Duzee.

apex, anteriorly very broadly rounded, deflected to left in ventral view. Femora normal, tibiae fairly flattened apically. Abdomen rounded in posterior view and only becoming broadly V-shaped anteriorly. Apex of male abdomen Fig. 28 C, hind margin of pygophore strongly excavated medially and lateral lobes on either side of this excavation with the inner margins sinuate, apically a little produced. Clasper Fig. 25 F, slightly F-shaped. Aedeagus of male Fig.

25 E, with phallosoma rather short, conjunctiva basally shortly tubular with rather large dorsally directed "lappet" processes, more distally two conjunctival processes which are dorsally sclerotized. Medial penial plates shaped rather as an inverted T, directed downwards, gonophore opening between the conjunctival processes. Apex of female abdomen Fig. 28 D, hind margins of first gonocoxae faintly oblique and nearly straight.

Dimensions—

MALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	10	45	2.4	5.3	40-49
Head width	10	52	2.4	4.7	48-55
Antennal segment I	15	11	0.9	8.4	10-13
Antennal segment II	14	19	1.4	7.6	17-22
Antennal segment III	13	21	0.9	4.0	20-23
Antennal segment IV	11	27	1.3	4.8	25-29
Antennal segment V	8	29	1.1	3.7	28-31
Pronotum width	10	119	5.8	4.8	110-125
Pronotum length	10	39	3.8	9.7	33-45
Total length	10	186	14.6	7.8	160-205

FEMALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	21	48	4.2	8.8	39-52
Head width	21	54	3.3	6.2	46-58
Antennal segment I	29	11	0.7	6.1	9-12
Antennal segment II	33	18	1.9	10.6	15-23
Antennal segment III	28	20	2.3	11.7	15-26
Antennal segment IV	23	23	2.6	10.9	17-26
Antennal segment V	19	26	2.6	9.9	20-29
Pronotum width	21	128	10.8	8.4	106-147
Pronotum length	21	40	5.8	14.5	30-54
Total length	21	191	15.8	8.2	161-220

Total length: 8.3-11.5 mm

Remarks: This species is one of the largest in the genus and easily recognised by the broad carmine bar across the hind portion of the pronotum and the strongly truncated lateral angles of the pronotum. It appears to have no other close relatives in the genus.

A feature of note is the rather high coefficient of variation in the series of females which could indicate that there may be two closely related species mixed in together in this sample. I was unable to make any real distinctions on the examples of this series but the point should be borne in mind and when a much larger series of males becomes available when the augmented male series should be examined for differences in the shape of the pygophore.

Location of type:

Holotype ♀ of *carneola* Van Duzee, "New South Wales," AMNH.

Specimens examined: The holotype and Northern Territory 1 ♀, Ooratippra, 275 m, 31.X.1962, E. S. Ross & D. Q. Cavagnaro CA; Queensland 1 ♀, 32 km north of Emerald, 10.I.1972, B. Cantrell UQ; New South Wales 1 ♀, South Ite Sand Hills (100 km south of Broken Hill), 10.XII.1966, J. B. Williams UQ; 1 ♀, Bogan River, Jan. 1932, J. Armstrong AM; 1 ♂, no precise locality, presented by Perth Museum BM 1953-629; Victoria 1 ♀, Lake Hattah, J.G.O. donated F. P. Spry 16.V.1922; 1 ♀ 4 ♂ ♀, Lake Hattah, J. E. Dixon, donated Jan. 1940; 1 ♂, Hattah, Mar. 1914, Dixon, donated F. P. Spry 5.X.1922; 1 ♂, Ouyen, donated F. P. Spry 5.X.1922; 1 ♀, Mallee, ex J. E. Dixon coll. donated Jan. 1940; 2 ♂, 1 ♀, Mallee, Oct. 1904, donated F. P. Spry 8.X.1922; 1 ♀, Quantong, June 1929, A. D. Selby NM; South Australia 1 ♀, no further data AM; 1 ♂, Minnipa, H. A. Johnson;

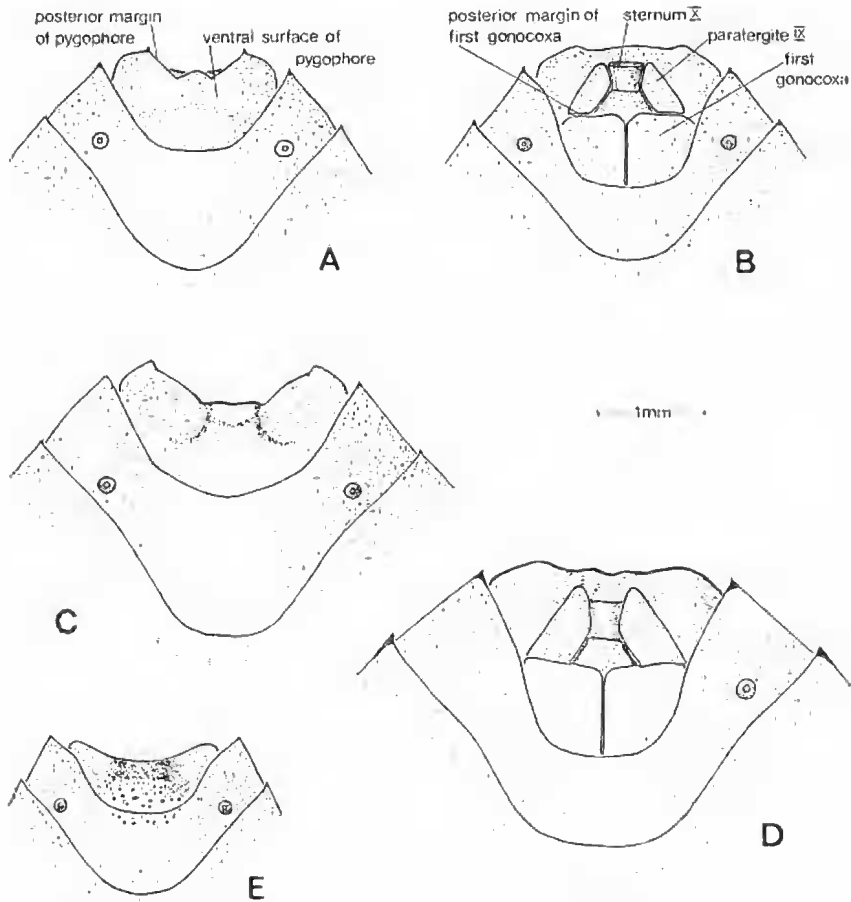


Fig. 28. *Cuspicona cooperi* sp. nov., *Cuspicona carneola* Van Duzee, *Cuspicona phi* sp. nov. A-B. *Cuspicona cooperi*. A. ventral aspect of male abdomen. B. ventral aspect of female abdomen. C-D. *Cuspicona carneola*. C. ventral aspect of male abdomen. D. ventral aspect of female abdomen. E. *Cuspicona phi*—ventral aspect of male abdomen.

1 ♀, St. Francis Island; 1 ♀, Ardrossan, 25.VII.1879, Tepper; 1 ♀, Adelaide, 12.VII.1947, F. J. Mitchell; 1 ♂, 1 ♀, Karoonda; 1 ♀, Mallee, 22.X.1879, SAM; 1 ♂, 1 ♀, no precise locality, H. Edwards AMNH; Western Australia 1 ♀, Katanning, 12.X.1941, K. R. Norris ANIC; 1 ♂, 1 ♀, Swan River, L. J. Newman, presented by Comm. Inst. Ent. BM 1948-548.

***Cuspicona obesula* sp. nov.**

Figs. 29, 30 A-B, 32 E-F

Description:

General appearance: Ground colour bright green in life fading to brownish-yellow in museum specimens. Anterolateral margins of pronotum (including produced lateral angles) carmine-red, apex of scutellum reddish-orange. Head brownish-yellow, just interior of anterolateral margins of pronotum in anterior 2/3 a yellowish stripe, a median longitudinal yellowish stripe on scutellum in apical half but terminating before apex. Lateral angles of pronotum produced rectangularly.

Head: Yellowish-brown and rather convex above, groove between anteclypeus and rest of head infuscated in posterior half, a patch of fine black punctations medially at base, just inward of eyes glabrous. Lateral margins with fine black punctations or very narrowly infuscated. Ocelli and eyes purplish-grey. Lateral margins gently angulately concave.

Pronotum: Concolorous, lateral margins narrowly at apex and more broadly at produced lateral angles margined with carmine-red in anterior 2/3, this red bordered interiorly by a yellow bar. In faded examples sometimes a transverse band of fine black punctations between lateral angles. Anterior margin obliquely truncate behind eyes and rather trapeziformly excavate behind collum, anterolateral angles produced as a small ridge. Anterolateral margins thickened and irregular, nearly straight but diverging in anterior halves, posterior halves with lateral angles produced as rectangular sub-spinous angles directed outwards only, about 40 per cent length of posterolateral margin, basal diameter also about 40 per cent of latter.

Posterolateral margin gently concave, posterior margin gently concave medially, produced into posteriorly directed lobes at junction with posterolateral margins.

Scutellum: Concolorous with apex broadly reddish-orange, latter preceded by a medial longitudinal yellow streak which becomes obsolete near middle. Black punctations absent or only faintly indicated laterally to latter. No fovea at bases of lateral margins, latter faintly concave in basal half then changing direction and nearly straight but converging to broadly rounded apex. Frena reaching to about half length.

Hemelytra: Coriaceous parts concolorous with coarse punctations. Outer margin of corium concave in basal quarter then broadly convex to shortly rounded apical angle. Posterior margin straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous above.

Laterotergites: Concolorous, posterior exterior angles almost rectangular.

Underside: Concolorous; head yellowish-brown except at base; first three segments of antennae mainly yellowish-brown, apex of third and whole of fourth and fifth segments reddish-brown; rostrum yellowish-brown, ventrally and apex blackish; all thoracic sterna and keels and a broad median longitudinal bar on abdomen reaching to apex of VIIth segment whitish luteous; lateral margins of prothorax carmine-red; apices of the tibiae and tarsomeres reddish-brown.

Bucculae low and sinuate, reaching to middle of eye, produced into a thickened convex lobe anteriorly. Rostral segment I robust, just surpassing base of bucculae, II slightly arched and compressed and surpassing fore coxae, III surpassing mid coxae and IV to about apex of abdominal ventrite III. Ratio of antennal seg-

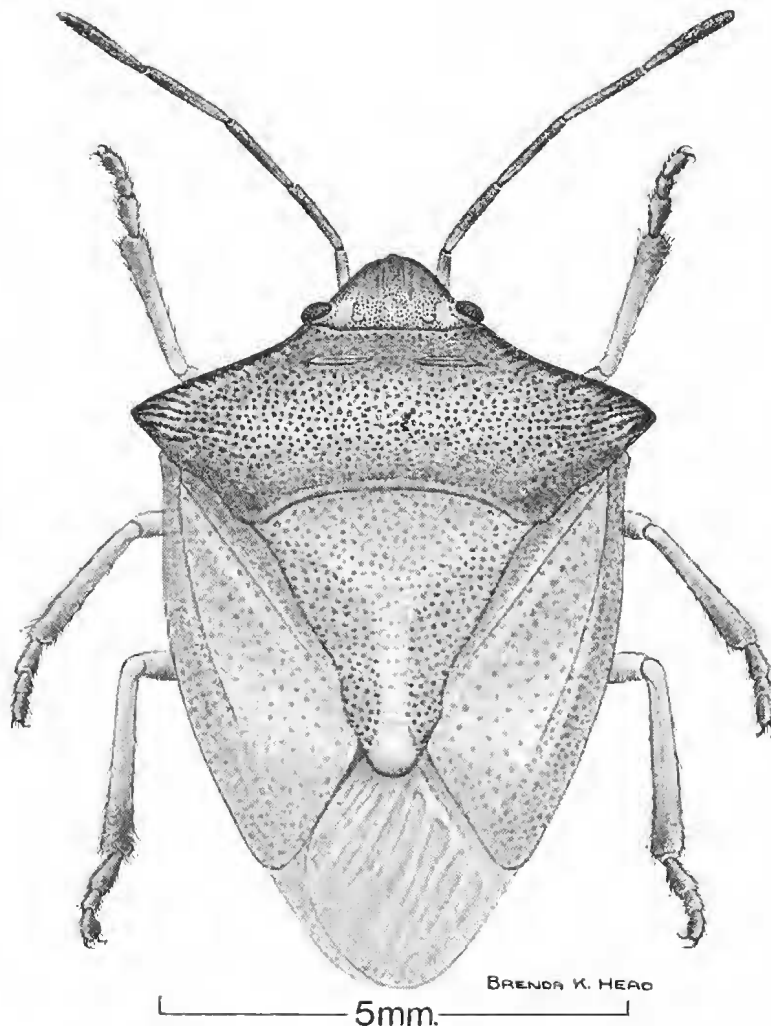


Fig. 29. Dorsal aspect of *Cuspicona obesula* sp. nov.

ments I-V 9:19:20:21:23. Propleuron with a strong raised ridge behind anterior margin mostly coarsely punctate but more finely and sparsely punctate exteriorly in anterior half, mesopleuron punctate in a triangular patch lying anteroventrally, metapleuron punctate below and behind evaporative area. Metasternal-mesosternal keels a little higher anteriorly than posteriorly, reaching over prosternum almost to its apex, anteriorly very broadly rounded, deflected to left in ventral view. Femora normal, tibiae a little flattened apically. Abdomen rounded in posterior view

but segments VII-III progressively more V-shaped. Apex of male abdomen Fig. 32 E, hind margin of pygophore reddish, medially rectangularly excavate, laterally sinuated. Clasper Fig. 30 B, strongly F-shaped. Aedeagus of male Fig. 30 A, conjunctiva produced into two tubular apical processes which cross over each other, "lappet" processes elongate, medial penial plates elongate with a posterior concavity, lower lobe with a small spine on its dorsal surface. Apex of female abdomen Fig. 32 F, hind margins of first gonocoxae distinctly oblique and straight,

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	14	33	1.2	3.5	31-35
Head width	14	38	1.1	2.8	36-40
Antennal segment I	19	9	0.6	6.5	9-11
Antennal segment II	19	19	0.9	4.7	16-20
Antennal segment III	19	20	1.3	6.4	18-21
Antennal segment IV	16	21	1.0	4.8	20-23
Antennal segment V	13	23	1.2	5.2	21-24
Pronotum width	14	101	3.0	2.9	96-106
Pronotum length	14	35	2.9	8.1	31-41
Total length	14	150	7.3	4.9	138-165

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	25	36	1.3	3.7	33-38
Head width	25	41	1.2	2.9	37-42
Antennal segment I	45	10	0.6	6.6	8-11
Antennal segment II	46	19	1.0	5.1	16-20
Antennal segment III	44	19	1.0	5.3	17-21
Antennal segment IV	36	20	0.9	4.4	18-21
Antennal segment V	27	22	1.1	5.3	20-23
Pronotum width	25	110	4.5	4.0	98-118
Pronotum length	25	38	3.5	9.2	31-43
Total length	25	165	10.3	6.2	146-183

Total length: 7.2-9.5 mm.

Remarks: *C. obesula* shows some affinity with the *thoracica* group of species in that in some examples a transverse band of dark punctations crosses the pronotum between the lateral angles. However the lack of black areas on the lateral angles, the only modest production of these angles and the strong medial excavation of the hind margin of the pygophore indicate that the relationship is not close. The strong red lateral coloration is similar to that of *carneola* but the more narrow head and more produced lateral angles of the pronotum indicates that *obesula* is not very closely related to *carneola*.

C. obesula occurs in the southern wetter part of South Australia from the Mount Lofty Ranges east to the Victorian border and in the adjacent western districts of Victoria. The only host plants recorded both belong to the genus *Leptospermum* (Myrtaceae).

Location of types:

Holotype ♀ (Reg. No. 120,683), 1 paratype ♂, (Reg. No. 120,684), 3 paratype ♀ (Reg. No. 120,685-7), 6 km east of Lucindale, South Australia, on *Leptospermum myrsinoides* Schlecht 26.XII.1968, A. N. McFarland; Paratypes: 1 ♀, (Reg. No. 120,688), Naracoorte Cave Reserve, South Australia, by sweeping *Leptospermum myrsinoides* Schlecht in *Eucalyptus obliqua* L'Herit dominated dry sclerophyll forest, 25.X.1958, G. F. Gross; 1 ♀, (Reg. No. 120,689), nr. Coonalpyn, South Australia, by beating *Leptospermum coriaceum* (FvM) Cheel, Sept. 1967, A. N. McFarland; 1 ♀, (Reg. No. 120,690), Meningie, South Australia, in mallee scrub, 1.XI.70, V. H. Mincham; 1 ♀, (Reg. No. 120,691), Blewitts Springs, South Australia, 20.X.1972, C. van Dijk; 2 ♀ (Reg. No. 120,692-3), Mt. Lofty Ranges, South Australia, N. B.

Tindale; 1 ♂ (Reg. No. I.20,699), Williamstown, South Australia, on *Leptospermum*, 20.X.1888, J. O. Tepper; 1 ♀ (Reg. No. I20,695), Largs North, South Australia, Nov. 1969, R. Cook; 1 ♂, 1 ♀, (Reg. Nos. I20,718, I20,696), Pt. Lincoln, South Australia, A. M. Lea; 1 ♀ (Reg. No. I20,697), Marble Range in Pt. Lincoln District, South Australia, 15.X.1957, N. B. Tindale SAM; allotype ♂, 1 paratype ♂, Little Desert, Victoria, 23.X.1952, A. Burns; Paratypes (continued): 1 ♀, Little Desert, Victoria, 17-25.X.1952, E. Matheson; 2 ♂, 2 ♀, Lake Hattah, Victoria, J. E. Dixon; 1 ♂, Kiata, Victoria, Oct. 1929, F. E. Wilson; 1 ♀, Kiata, Victoria, Oct. 1928, F. E. Wilson; 1 ♀, Grampians, Victoria, Nov. 1922; 1 ♀, Grampians, Victoria, 29.X.1946, A. Burns NM; 1 ♀, 8 km south of Lah Arum, Grampians, Victoria, 5.II.1956, I. F. B. Common; 1 ♀, Little Desert 8 km south of Kiata, Victoria, 12.II.1956, I. F. B. Common ANIC; 1 ♂, 1 ♀, Murray Bridge, South Australia, A. M. Lea, AM; 1 ♂, 1 ♀, Lake Hattah, Victoria, J. E. Dixon; 1 ♂, Mt. Lofty Ranges, South Australia, N. B. Tindale BM; 1 ♂, 2 ♀ ♀, Aldgate, Mt. Lofty Ranges, South Australia, 29.XI.1931, Darlington on Harvard Expedition AMNH; 3 ♂, Bordertown, South Australia, 22.X.1963, J. Sedlacek BISHOP.

Specimens examined: The type series only.

Thoracica Group

The *thoracica* group of species includes species which appear to be restricted to the wetter parts along the east and south coasts of the Australian continent, including the south-west corner of Western Australia. Members of the group are absent from the wetter forests of north Western Australia and the Northern Territory. The species in this group are probably all grass green in life with the tips of pronotal spines black or black punctate. Black punctations are always present laterally near the apex of the scutellum and frequently on the hind lobe of the pronotum as well. Luteous markings are common and sometimes some areas are pinkish. The lateral angles of the pronotum are always produced into a conical spine. The hind margin of the corium is almost straight.

The first gonocoxae of the female have the posterior margin transversely or obliquely truncate or sinuate, if part of this margin is produced more posteriorly than any other part then it is the exterior half.

Host plant records for the group include species of *Aster* (introduced), *Hakea*, *Melaleuca*, *Leptospermum* and *Callitris* representing the families Compositae, Proteaceae, Myrtaceae and Cupressaceae.

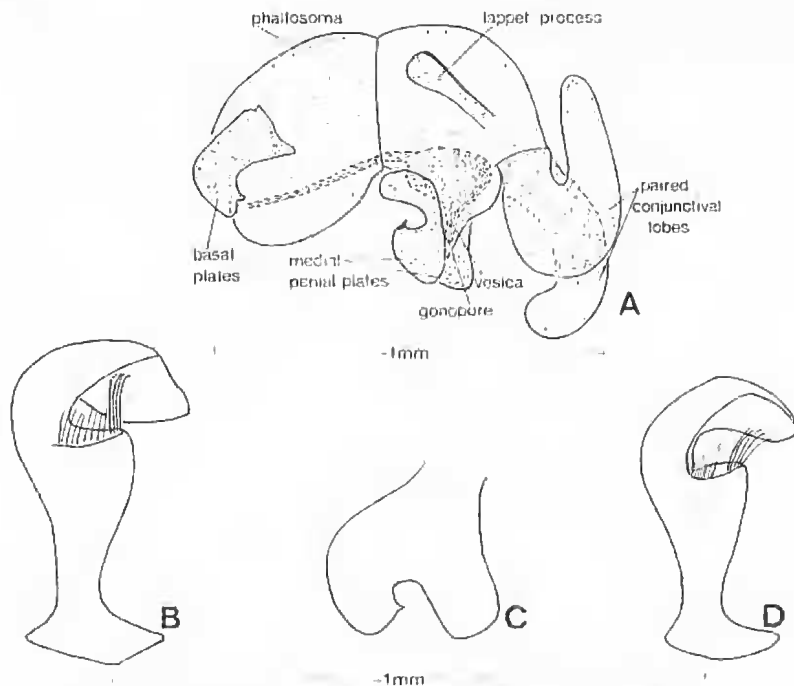


Fig. 30. *Cuspicona obesula* sp. nov. - *Cuspicona thoracica* (Westwood). A-B. *Cuspicona obesula*. A. left-hand side aspect of aedeagus. B. clasper. C-D. *Cuspicona thoracica*. C. left-hand side aspect of visible portion of a medial penial plate of aedeagus. D. clasper.

Cuspicona procallosa sp. nov.

Figs. 31, 32 C-D

Description:

General appearance: Ground colour in museum specimens yellow or brownish-yellow with a few black punctations along lateral margins of head, dorsally on pronotal spines in apical

half, and on scutellum on either side of midline (but not reaching base or apex). Lateral angles of pronotum produced into conical spines.

Head: Concolorous and rather convex above, some black punctations along lateral margins. Eyes and ocelli purplish or grey. Lateral margins gently angulately concave.

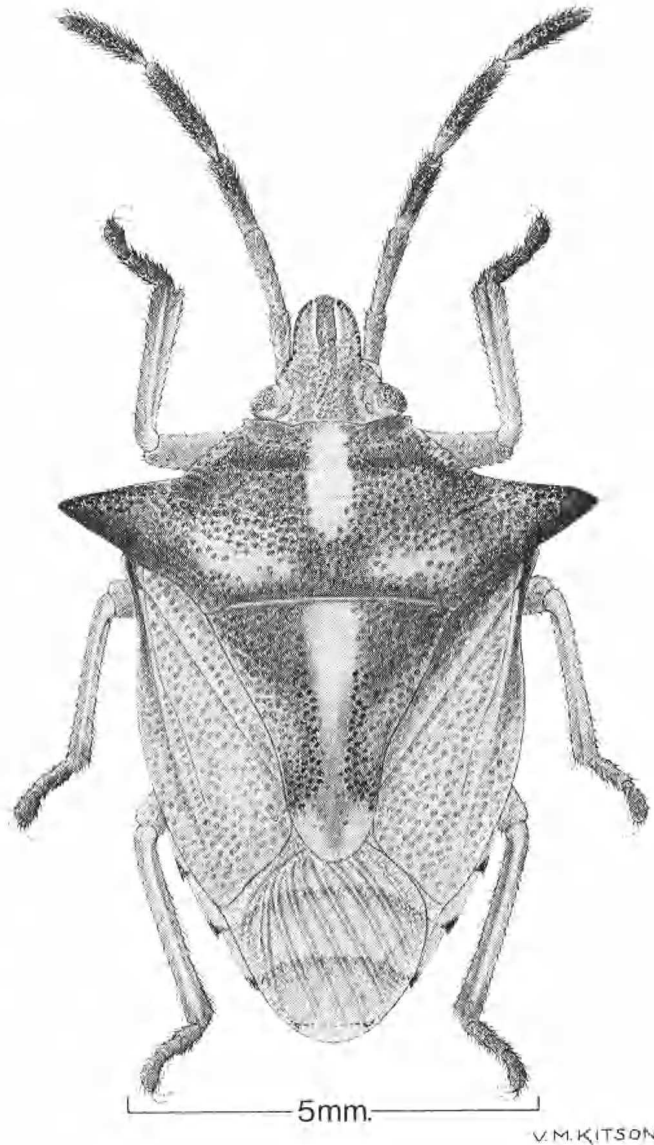


Fig. 31. Dorsal aspect of *Cuspicona procallosa* sp. nov.

Pronotum: Concolorous, but dorsal surface of exterior portion of spinous angles of pronotum with black punctations in apical half and black along apical half of anterior margins of these spines and at extreme apex; sometimes a few scattered dark punctations medially just in front of hind margin of pronotal disc. In anterior half of pronotum in the middle a broad longitudinal pale yellow or luteous glabrous fascia or bar, sometimes a glabrous patch of the same colour on each side just in front of posterior

angles (as in example figured). Anterior margin obliquely truncate behind eyes and only shallowly concave behind collum, anterolateral angles hardly produced. Anterolateral margins obtuse and nearly straight in anterior halves, posterior halves, with lateral angles, each produced into a conical spinous process directed outwards and only a little upwards, about as long as posterolateral margin, its basal diameter about 75 per cent length of latter. Posterolateral margin concave, posterior margin broadly concave.

Scutellum: Concolorous with apex (broadly) and midline luteous and nearly glabrous, midline area widening anteriad. Laterally to midline and beginning about a third of the way back and reaching to about three quarters of the way back an area of black punctation on each side, basally this patch narrow and paralleling the pale streak, apically broadened and reaching lateral margins, one or two black punctations medially on glabrous area where the lateral patches finish. No fovea at bases of lateral margins, latter broadly concave in basal half then changing direction and nearly straight but faintly converging to broadly rounded apex. Frena reaching to about half length.

Hemelytra: Coriaceous parts concolorous with coarse concolorous punctation. Outer margin of corium concave in basal quarter then broadly convex to shortly rounded apical angle. Posterior margin straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous above but with upper surface of pygophore somewhat darkened. Sometimes some black patches, one under tip of scutellum and the other before pygophore.

Laterotergites: Concolorous but posterior exterior angles of III-VII black, latter almost rectangular.

Underside: Concolorous except extreme apex of prothoracic spine, posterior angles of abdominal ventrites III-VII, rostrum ventrally and apical third of its last segment, black. Apical third of antennal segment III, antennal segments IV and V, and sometimes tarsi and extreme apices of tibiae, light brown.

Bucculae punctate, not reaching base of head but to middle of eye, sinuate, produced into a convex lobe anteriorly. Rostral segment I robust, surpassing base of bucculae and reaching onto apex of prosternum, II arched and compressed and reaching mid coxae, III to about middle of hind coxae, IV to about base of abdominal ventrite IV. Ratio of antennal segments I-V 11:20:19:23:21. Most of propleuron (except two glabrous patches medially), mesepisternum, metepisternum and hind portion of metapleuron punctate. Metasternal-mesosternal keel higher anteriorly than posteriorly, reaching over prosternum almost to its apex, anteriorly broadly rounded, deflected to left in ventral view. Femora normal, tibiae a little flattened apically. Midline of abdomen narrowly luteous, rounded in posterior view but segments VII-III progressively more V-shaped. Spiracles a little raised. Apex of male abdomen Fig. 32 C, apical margin of pygophore shallowly concave, rather reflexed. Apex of female abdomen Fig. 32 D, hind margin of first gonocoxae oblique and slightly concave.

Dimensions—

MALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	9	36	2.6	7.2	32-41
Head width	11	36	3.5	9.7	26-39
Antennal segment I	17	11	0.8	7.2	9-12
Antennal segment II	17	20	1.2	6.3	17-22
Antennal segment III	16	19	1.3	6.8	16-20
Antennal segment IV	8	24	1.7	7.0	22-26
Antennal segment V	6	22	1.0	4.9	20-23
Pronotum width	11	120	6.2	5.2	110-133
Pronotum length	11	32	4.0	12.3	26-40
Total length	11	158	9.7	6.1	150-180

FEMALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	6	39	1.3	3.4	37-41
Head width	7	38	1.5	3.9	36-40
Antennal segment I	10	11	1.0	9.2	9-12
Antennal segment II	10	19	1.1	5.8	17-20
Antennal segment III	10	18	1.7	9.3	16-21
Antennal segment IV	8	22	1.9	8.9	19-25
Antennal segment V	6	20	0.8	4.2	19-21
Pronotum width	7	133	29.5	22.1	113-199
Pronotum length	7	34	5.5	15.7	25-42
Total length	7	166	9.8	5.9	148-180

Total length: 7.7-9.4 mm.

Remarks: *C. procallosa* is fairly easy to recognise by the longitudinal pale callous bar in the anterior half of the pronotum and by the black posterior exterior angles of the laterotergites and abdominal ventrites. The species is restricted to the southwestern portion of Western Australia.

Location of types:

(All cited localities are in Western Australia.)
 Holotype ♂, Fremantle, 3.II.1934, K. R. Norris; allotype ♀, same locality and collector but 2.II.1934; 1 paratype ♀, 1 km. WNW Foul Bay, Augusta (34° 19S 115° 10E), 3.XI.1969, E. B. Britton; 1 paratype ♂, Deep Dene, Karridale,

16.XII.1962, L. M. O'Halloran ANIC; 1 paratype ♀, Geraldton, W. D. Dodd SAM; 1 paratype ♀, Geraldton and Mullewa, Lea; 1 paratype ♂, Geraldton; 2 paratype ♂, Swan River, L. J. Newman; 1 paratype ♂, Swan River; 1 paratype ♀, Flinders Bay, 11.IV.1936, A. L. Raymond (BM 1936-429); 3 paratype ♂, 2 paratype ♀, Yanchep, 50 km north of Perth, 29 Jan-8th Feb. 1936, R. E. Turner (BM 1936-28) BM; 1 paratype ♂, Cape Naturaliste, 5 m, 27.IX.1962, E. S. Ross and D. Q. Cavagnaro CA, 1 paratype ♂, Mt. William, 250 m, 6.XI.1963, J. Sedlacek BISHOP.

Specimens examined: The types only.

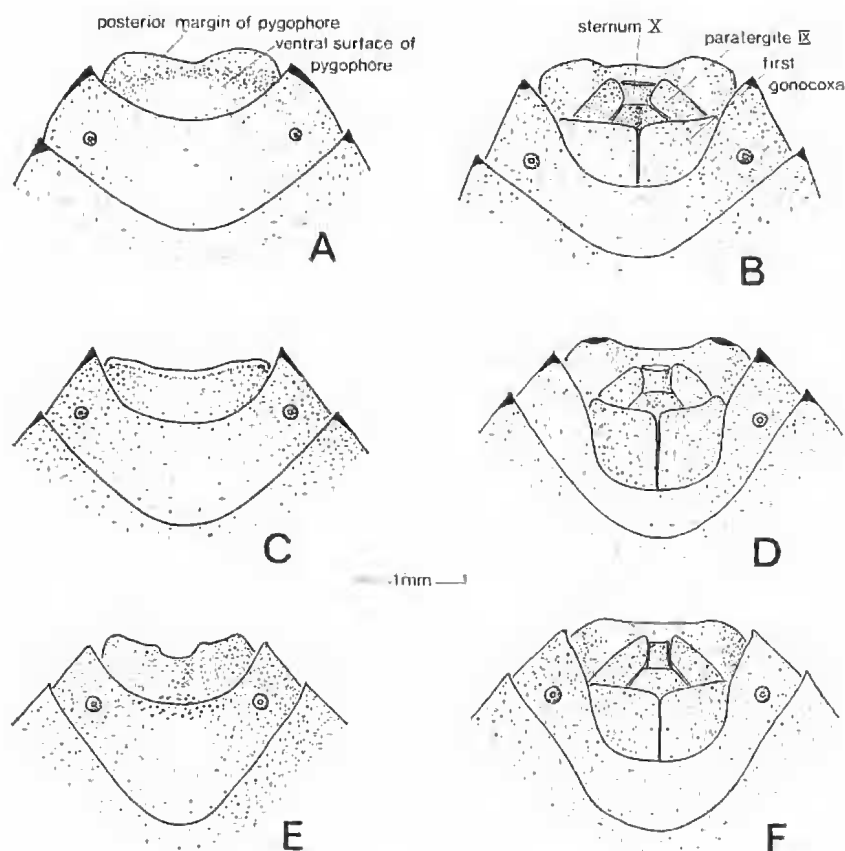


Fig. 32. *Cuspicona equisignata* sp. nov., *procallosa* sp. nov., *obesula* sp. nov. A-B. *Cuspicona equisignata*. A. ventral aspect of apex of male abdomen. B. ventral aspect of apex of female abdomen. C-D. *Cuspicona procallosa*. C. ventral aspect of apex of male abdomen. D. ventral aspect of apex of female abdomen. E-F. *Cuspicona obesula*. E. ventral aspect of apex of male abdomen. F. ventral aspect of apex of female abdomen.

***Cuspicona equisignata* sp. nov.**

Figs. 32 A-B, 33

Description:

General appearance: Ground colour in museum specimens yellow with black punctations on head (sparse), pronotum and scutellum. Lateral angles of pronotum produced into conical spines.

Head: Concolorous and rather convex above, some punctations concolorous but on disc of jugs towards apex and near base a few black punctations. Eyes and ocelli purplish or grey. Lateral margins concave.

Pronotum: Mostly concolorous but anteriorly in either side of midline adjoined to anterior margin and reaching about a third of the distance

back a pair of longitudinal lines of black punctations, between these lines and extending back almost to hind margin on Cape York examples a pink longitudinal median linear marking. Dorsal surface of spines black punctate, especially towards apices, across posterior portion of pronotum between spines a diffuse line of sparse black punctations. Anterior margin oblique behind eyes and rather rectangularly excavate behind collum, anterolateral angles produced as a small ridge. Anterolateral margins obtuse and nearly straight in anterior halves, posterior halves with lateral angles each produced into a conical slightly recurved spinous process directed outwards and only a little upwards, not as long as posterolateral margin, its basal diameter about 75 per cent length of posterolateral margin. Posterolateral margin slightly sinuate, posterior margin broadly concave.

Scutellum: Concolorous with apex (broadly) and midline luteous and nearly glabrous, midline area wider anteriorly than posteriorly where it runs into glabrous apical area. Laterally to these glabrous areas punctations all black, or some black and some concolorous, just behind where luteous midline joins apical area a few scattered punctations near the midline in the luteous area. No fovea at base of lateral margins, latter broadly convex in basal half then changing direction and broadly convex to broadly rounded apex. Frena reaching reaching to about half length.

Hemelytra: Coriaceous parts concolorous with coarse punctation, some or many of these punctations fuscous, inner angle of corium narrowly black. Exterior margin of corium concave in basal quarter then broadly convex

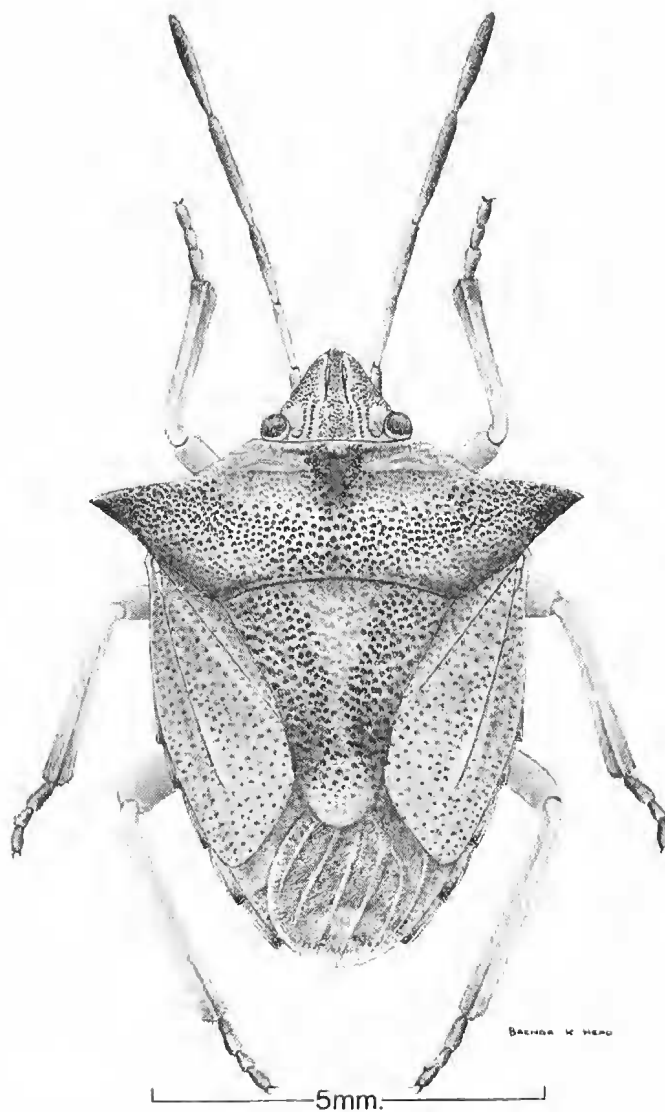


Fig. 33. Dorsal aspect of *Cuspicona equisignata* sp. nov.

to nearly acute apical angle, posterior margin nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Concolorous or with a fuscous area around apex of scutellum or (holotype) with a broad longitudinal black band behind scutellum reaching apex. Dorsum of pygophore with a lateral black patch on either side, dorsum of female genitalia with a fuscous patch on either side of midline.

Laterotergites: Concolorous, posterior exterior angles of III-VII black, almost rectangular, hind margin of VII strongly black in holotype.

Underside: Concolorous except extreme tip of prothoracic spine and posterior angles of abdominal ventrites III-VII, rostrum ventrally and apical third of its last segment, black. Apical half of antennal segment III, antennal segments IV and V, tarsi and extreme apices of tibiae brown. Bucculae not reaching base of head but

to middle of eye, elevated, sinuate, produced into a convex lobe anteriorly. Rostral segment I robust, surpassing base of bucculae and reaching nearly to fore coxae, II arched and reaching mid coxae, III to about middle of hind coxae or beyond, IV onto IVth abdominal ventrite. Ratio of antennal segments 10:21:21:25:24. Episterna, proepimera, propleuron, and hind portion of metapleuron, and abdomen (except along midline) punctate. Metasternal-mesosternal keel higher anteriorly than posteriorly, reaching over prosternum but not to apex, anteriorly broadly rounded, deflected to left in ventral view. Femora normal, tibiae a little flattened apically. Abdomen with midline luteous, rounded in posterior view but segments VII-III progressively more V-shaped. Spiracles raised. Apex of male abdomen Fig. 32 A, apical margin of pygophore somewhat triangularly excavate, reflexed. Apex of female abdomen Fig. 32 B, hind margins of first gonocoxae half truncate and only faintly oblique.

Dimensions—

Parameter	Holotype ♂	Allotype ♀	Paratype ♂	Paratype ♀
Head length	36	35	41	37
Head width	37	39	39	39
Antennal segment I	10, 10	11, 11	11, 11	10, 10
Antennal segment II	21, 21	21, 21	23, 23	21, 21
Antennal segment III	19, 19	20, 20	24, 23	20, 21
Antennal segment IV	29, 29	24, 25	30, 22	24, 24
Antennal segment V	26, 26	23, 23	24, —	24, —
Pronotum width	110	121	121	115
Pronotum length	28	36	34	30
Total length	148	170	158	140

Total length: 7.7-9.0 mm.

Remarks: Only the four specimens listed above are known, the distribution appears to be unusually wide for such an uncommon species and it may be noted here that some other localities on Captain S. A. White labels have proved to be in error, these Cape York Peninsula records may also be. The species is similar to *procallosa* having the same black posterior angles to the laterotergites and abdominal ventrites and a callous median patch anteriorly on the pronotum. It differs from that species in having a small black line on either side of the anterior callosity of the pronotum and the V-shaped posterior margin of the pygophore and the more black punctate hind portion of the pronotum. It is also somewhat similar to *phi* but differs in not having the underside of the pronotal spines strongly punctate right to their bases.

Location of types:

Holotype ♂ (Reg. No. I20,672), allotype ♀ (Reg. No. I20,673), 1 paratype ♀ (Reg. No.

I20,674), Cape York Peninsula, Queensland, Captain S. A. White; 1 paratype ♂ (Reg. No. 20,675), Mt. Wedge, South Australia, 16.X. 1954, N. B. Tindale SAM.

Specimens examined: The types only.

***Cuspicona phi* sp. nov.**

Figs. 28 E, 34, 36 F

Description: Ground colour in museum specimens brownish-yellow with black punctations on hind portion of pronotum and scutellum, on underside of frontal spines and hind or ventral portions of thoracic pleura, black markings on dorsum of abdomen above. Lateral angles of pronotum produced into conical spines.

Head: Concolorous and rather convex above; punctation rather sparse and concolorous or light brown, arranged in rows. Eyes and ocelli purplish red. Lateral margins strongly concave.

Pronotum: In anterior portion mostly concolorous with brown punctations but calli a darker brown, between calli and extending to anterior margin a rather callous luteous marking. On dorsal surface of produced lateral spines and in disc between them a broad rather diffuse band of black punctations, apices of lateral spines black. Anterior margin oblique behind eyes and broadly excavate behind collum, anterolateral angles produced into a small ridge. Lateral margins obtuse and slightly convex in their anterior halves, posterior halves with lateral angles produced into a conical slightly recurved spinous process directed outwards and only a little upwards, not as long as posterolateral margins, its basal diameter about 75 per cent length of posterolateral margin. Posterolateral margin obtusangulately excavate, posterior margin broadly concave.

Scutellum: Concolorous and finely punctate with apical third luteous and glabrous, this luteous produced forward along midline. In apical fifth some black punctations medially, just anterior to these on either side (leaving midline there broadly impunctate) a triangular to quadrate patch of black punctations. A concolorous fovea visible at base of lateral margins in one of the paratypes, lateral margins broadly convex in basal half, then changing direction and broadly convex to broadly rounded apex. Frena reaching to about half length.

Hemelytra: Coriaceous parts concolorous but inner angle or corium margined with fuscous. Exterior margin of corium concave in basal quarter then broadly rounded to almost rectangular apical angle, posterior margin nearly straight, inner angle broadly rounded. Clavus elongate

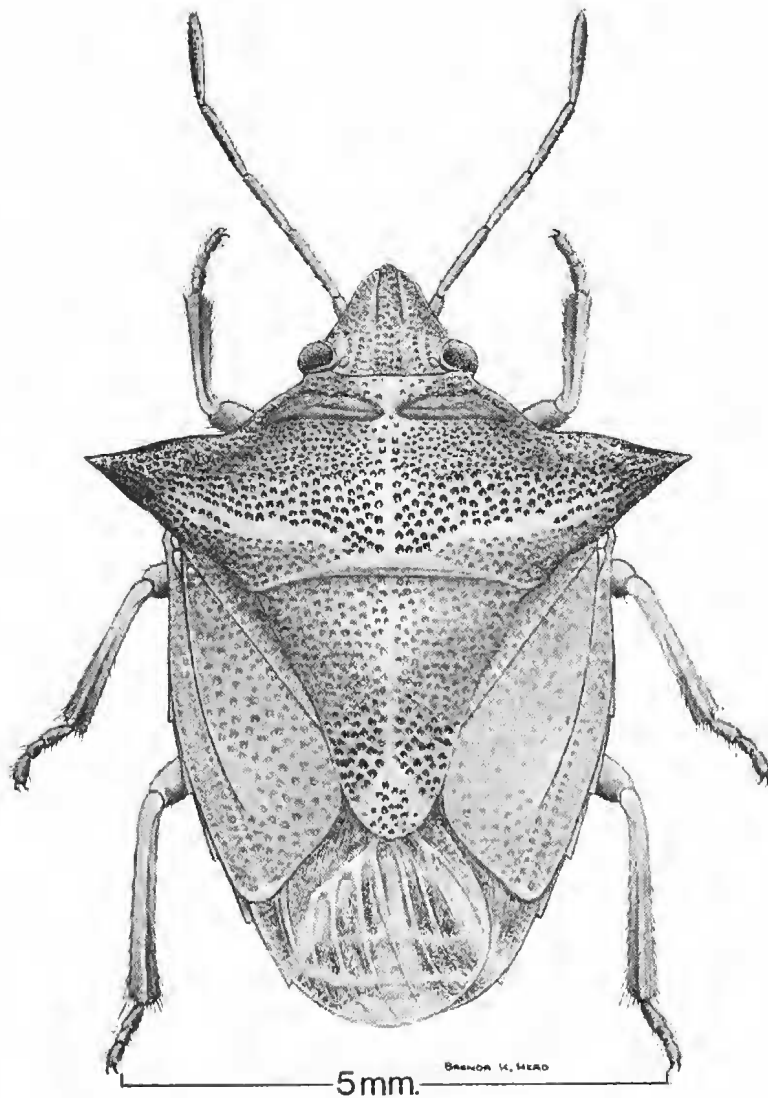


Fig. 34. Dorsal aspect of *Cuspicona phi* sp. nov.

triangular. Membrane and veins largely hyaline but at inner anterior angle a small longitudinal fuscous bar joining the fuscous on inner angle of corium.

Abdomen: Concolorous; large single or paired black patches on segments VI and VII medially, dorsum of female genitalia with large, black patches, one on each side.

Laterotergites: Concolorous but fuscous along posterior margin of VII, lateral angles almost rectangular.

Underside: Concolorous but in holotype with a reddish tinge and reddish punctations, reddish especially more intense on evaporative area, on femora and broadly along lateral margins of abdominal ventrite VII. Bucculae, whole underside of spinous angles of pronotum and extending somewhat onto propleuron, and female genitalia with reddish fuscous punctations. Rostrum ventrally and most of apical segment black. Prominent luteous areas ventrally and along hind margin of propleuron turning anteriorly under punctate area on lateral spines, ventrally on mesopleuron and ventrally and

posteriorly on metapleuron. Mesosternal-metasternal keel semihyaline.

Bucculae not reaching base of head and not to past middle of eye, sinuate, produced into a convex lobe anteriorly. Rostral segment I robust, surpassing base of bucculae and reaching about base of head, II arched and reaching mid coxae, III to about middle of hind coxae and IV past middle of third abdominal ventrite. Ratio of antennal segments 9:16:12:18:16. Episterna, proepimeron and hind portions of pro- and metapleura punctate. Metasternal-mesosternal keel higher anteriorly than posteriorly, reaching over prosternum to about its apex, anteriorly broadly rounded, deflected to the left in ventral view. Femora normal, tibiae a little flattened exteriorly in apical quarter. Abdomen fairly densely punctate, rounded in posterior view but segments VI-III progressively more V-shaped. Apex of male abdomen Fig. 28 E, apical margin of pygophore gently concave medially and broadly convexly rounded laterally. Apex of female abdomen Fig. 36 F, hind margins of first gonocoxae somewhat oblique and narrowly sinuated.

Dimensions—

Parameter	Holotype ♂	Allotype ♀	Paratype ♀ (Peak-Downs)	Paratype ♀ (Peak-Downs)	Paratype ♂ (Sydney)
Head length	39	36	33	33	32
Head width	38	36	33	33	33
Antennal segment I	9, 9	9, 9	8, 9	8, 9	9, 8
Antennal segment II	19, 19	16, 17	15, —	16, 15	15, 16
Antennal segment III	13, 13	12, 13	12, —	12, 14	11, 12
Antennal segment IV	20, 21	18, 19	—	17, —	17, —
Antennal segment V	19, 19	17, 17	—	15, —	—
Pronotum width	116	115	103	115	103
Pronotum length	40	33	33	30	33
Total length	155	150	140	145	150

Total length: 7.3-7.8 mm.

Remarks: This species is apparently closely related to *procallosa* and *equisignata* but differs from them in not having prominently black posterior angles to laterotergites anterior to the VIIIth pair and by having dense black punctations on the underside of the pronotal spines. Only the nine specimens listed below are known.

Location of types:

Holotype ♂ (Reg. No. T7216), Mt. Tozer area, Iron Range, North Queensland, 29.IV-1.V.1973. G. B. Monteith QM; allotype ♀, West Normanby River, 64 km (40 miles) west of Cooktown, north Queensland, 12.XI.1965, G. Monteith UQ; 2 paratype ♀, Peak-Downs, Queensland; 1 ♀ paratype, Sydney (spelt "Sidney"), New South Wales STOCKHOLM; 2 paratype ♀, New South Wales, Dis-

tant coll, 1911-383 BM; 1 paratype ♂, Australia; 1 paratype ♀, New Holland, Deyrolle; 1 paratype ♀, Peak-Downs RM.

Specimens examined: The types only.

***Cuspicona angustizona* sp. nov.**

Figs. 35, 36 E

Description:

General appearance: Ground colour in museum specimens greenish yellow with black punctations on head (sparse), on upper surface of pronotal spines and in a narrow but dense band across disc of pronotum between lateral spines and beneath on underside of pronotal spines. Lateral angles of pronotum produced into conical spines.

Head: Concolorous, not very convex above; punctation moderately dense but fine, black and brown, basally arranged in rows. Eyes and ocelli dull purple. Lateral margins concave.

Pronotum: Concolorous with punctation mostly concolorous or reddish but on dorsal surface of lateral spine, in a narrow but dense band across disc between lateral spines and in a thin longitudinal, medial line only one or two punctations wide given off from transverse band to anterior margin (interrupted a little before anterior margin) with punctations black. Anterior margin oblique behind eyes and broadly excavate behind collum, anterolateral angles hardly produced. Lateral margins obtuse and only slightly convex in anterior two thirds, posterior thirds with lateral angles each produced into a conical slightly recurved spinous process directed outwards and a little upwards, not as long as posterolateral margins, basal diameter about 60 per cent length of posterolateral margin. Posterolateral

margin obtusangulately excavate, posterior margin broadly concave.

Scutellum: Concolorous and finely punctate anteriorly, in posterior third paler with scattered coarse black punctations, no less dense medially than laterally; this punctate area produced anteriorly from the main mass of punctations for a short distance along midline. A small concolorous fovea at base of each lateral margin, lateral margins almost straight in anterior half, then changing direction and almost straight to broadly rounded apex. Frena reaching about half length.

Hemelytra: Coriaceous parts fuscous but inner angle of corium and apical angle of claws margined with fuscous. Exterior margin of corium concave in basal quarter then broadly rounded to almost rectangular apical angle, posterior margin nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins largely hyaline but at inner

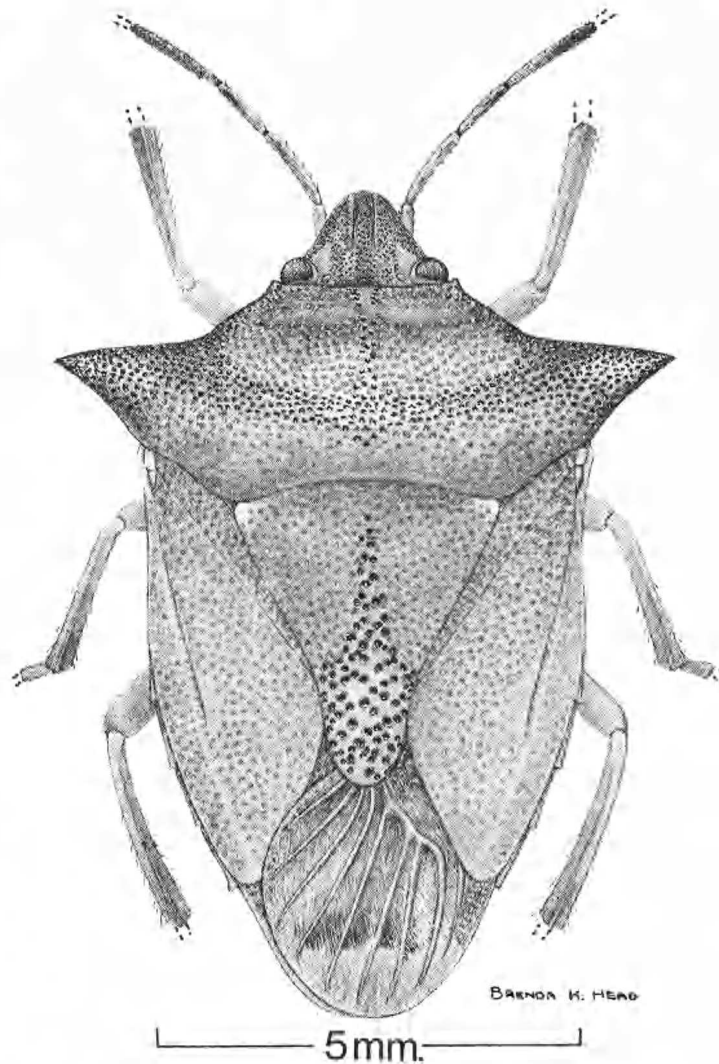


Fig. 35. Dorsal aspect of *Cuspicona angustizona* sp. nov.

anterior angle a small fuscous area adjoins the fuscous on corium and clavus.

Abdomen: Apparently concolorous or perhaps rather reddish medially, dorsum of female genitalia with some black patches.

Laterotergites: Concolorous but apical angle of VII darkened, lateral angles produced into a small spine.

Underside: Concolorous but bucculae, underside of pronotal spine and first gonocoxae of female with black punctations. Abdomen ventrally broadly luteous, a medial spot on propleura and posterior margins of paratergites VIII black. Metasternal-mesosternal keel hyaline.

Bucculae not reaching base of head and not to past middle of eye, sinuate, produced into a blunt triangular lobe anteriorly. Rostral segment I robust, just surpassing base of bucculae, II arched and probably reaching about mid coxae, IV and III missing on both specimens. Ratio of first four antennal segments (fifth missing in both specimens) 10:20:18:22. Episterna,

proepimeron, hind portion of propleuron and metapleuron punctate. Legs apparently normal, tibiae flattened towards apices, most tarsi missing on the two specimens examined. Metasternal-mesosternal keel higher and thinner anteriorly than posteriorly, reaching over prosternum nearly to its apex, anteriorly broadly rounded, deflected a little to the left in ventral view. Abdomen finely punctate, rounded in posterior view but segments VI-III progressively more V-shaped. Apex of female abdomen Fig. 36 E, hind margins of first gonocoxae oblique and narrowly sinuated. Males unknown.

Dimensions—

Parameter	Holotype ♀	Paratype -
Head length	38	36
Head width	41	39
Antennal segment I	10, 10	10, —
Antennal segment II	20, 20	—
Antennal segment III	18, 18	—
Antennal segment IV	22, —	—
Antennal segment V	Absent on both examples	
Pronotum width	130	125
Pronotum length	31	35
Total length	180	175

Total length: 9.1-9.4 mm

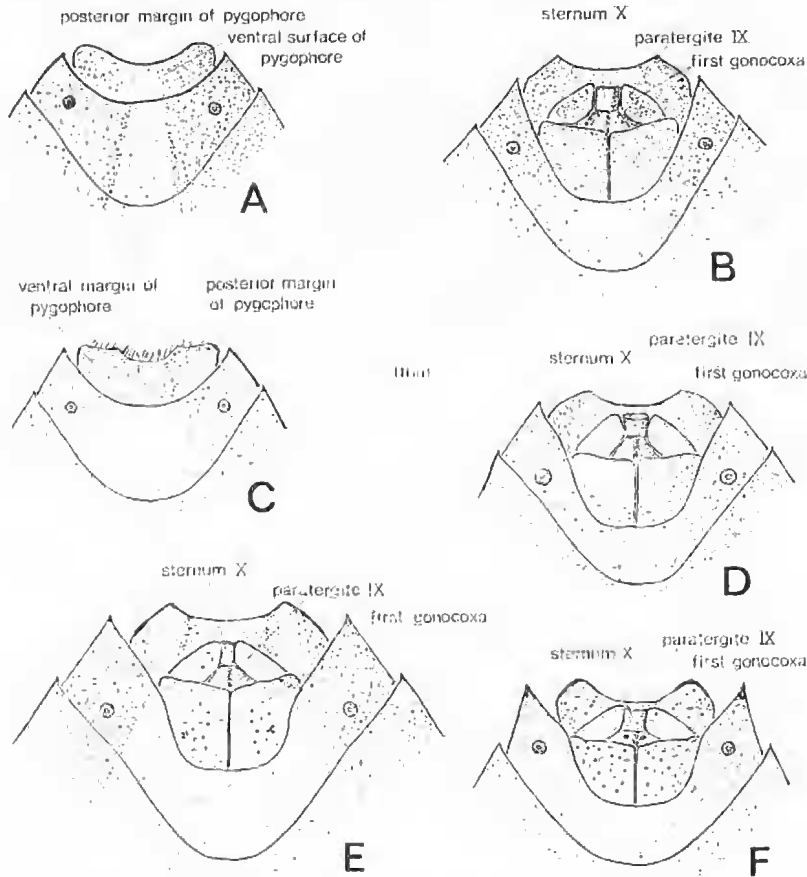


Fig. 36. *Cuspiconia apothoracica* sp. nov., *Cuspiconia thoracica* (Westwood), *Cuspiconia angustizona* sp. nov., *Cuspiconia phi* sp. nov. A-B. *Cuspiconia apothoracica*. A. ventral aspect of male abdomen. B. ventral aspect of female abdomen. C-D. *Cuspiconia thoracica*. C. ventral aspect of male abdomen. D. ventral aspect of female abdomen. E. *Cuspiconia angustizona*—ventral aspect of apex of female abdomen. F. *Cuspiconia phi*—ventral aspect of apex of female abdomen.

Remarks: This species is closely related to *phi*, having the apical area of the scutellum fairly evenly covered with black punctations and having a median prolongation forward of the transverse dark band on the pronotum. It differs by its larger size, prolongation forward of the black punctations medially on the scutellum and the strongly bicoloured abdomen beneath. Both examples are unfortunately incomplete.

Location of types:

Holotype ♀ (Reg. No. T7217), Brisbane, Queensland, R. Kumar QM; paratype ♀, Eidsvold, Queensland, ANIC.

Specimens examined: The types only.

***Cuspicona thoracica* (Westwood, 1837)**

Figs. 30 C-D, 36 C-D, 37, 38 A

Rhynchocoris thoracica Westwood, 1837, p. 30.

Cuspicona thoracica Dallas, 1851, p. 386. Mayr, 1866, p. 67. Stål, 1876, p. 103. Van Duzee, 1905, p. 208.

Cuspicona xanthochlora Walker, 1867, p. 389.

Description:

General appearance: Ground colour green in life with dorsum of head, a broad transverse band on pronotum between, and extending onto, produced lateral angles, antennae, underside of head, rostrum, apices of femora and tarsi brown. Basally or wholly on head, across pronotum as a transverse band, and laterally near apex of scutellum black punctate.

Head: Brown and flattened above; in males strongly punctate with black above on almost entire disc; females usually less extensively black punctate than males but basally a median quadrate area made up of three short parallel longitudinal bands of black punctations always present and lateral margins with black punctations. Eyes and ocelli purplish red.

Pronotum: Green in life, yellowish or pale yellowish brown in museum specimens; dorsal surface of lateral angles and a broad transverse band between them brown with numerous black punctations, this band of punctations about seven punctations wide medially, anteriorly and posteriorly to this band finely and concolorously punctate except on glabrous calli. Anterior margin

oblique behind eyes and concave behind collum. anterolateral angles produced into a very small tooth. Anterolateral margins obtuse, straight and diverging in anterior half; posteriorly half, with lateral angles, produced into a conical slightly recurved spinous process directed outwards and only a little upwards, about as long as posterolateral margin, its basal diameter about 75 per cent or less length of posterolateral margins. Posterolateral margins obtusangulately excavate, posterior margin broadly concave.

Scutellum: Green in life with anterior median portion rather yellowish-green, pale yellowish-brown in museum specimens. Apical half with a broad median luteous or reddish longitudinal stripe reaching apex, laterally to this a triangular or semi-circular patch of black punctations not beginning as far forward as base of luteous stripe nor reaching near to apex. Latter broadly impunctate. No fovea at base of lateral margins, latter broadly convex in basal half, then very broadly and slightly convex to rounded apex. Frena reaching nearly to half length.

Hemelytra: Green in life, pale yellowish brown in museum specimens, coarsely and concolorously punctate. Exterior margin of corium concave in basal quarter then broadly rounded to very shortly rounded apical angle, posterior margin nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Green in life, yellow in museum specimens; without black markings, except at posterior margins of pygophore.

Laterotergites: Green in life, narrowly black just laterally of midline on dorsum of female genitalia.

Underside: In life, pale green, in museum specimens yellowish brown. Underside of head yellowish; antennae, most of rostrum, apical half of pronotal spines, apices of tibiae, tarsi and pygophore ventrally brown. Rostrum ventrally and most of apical segment black. Mesosternal-metasternal keel, a broad median band on abdomen and all female external genitalia except paratergites VIII luteous. Underside of pronotal spines frequently reddish.

Bucculae not reaching base of head and not to past middle of eye, strongly sinuate, produced into a triangular lobe anteriorly. Rostral segment I robust, surpassing base of bucculae

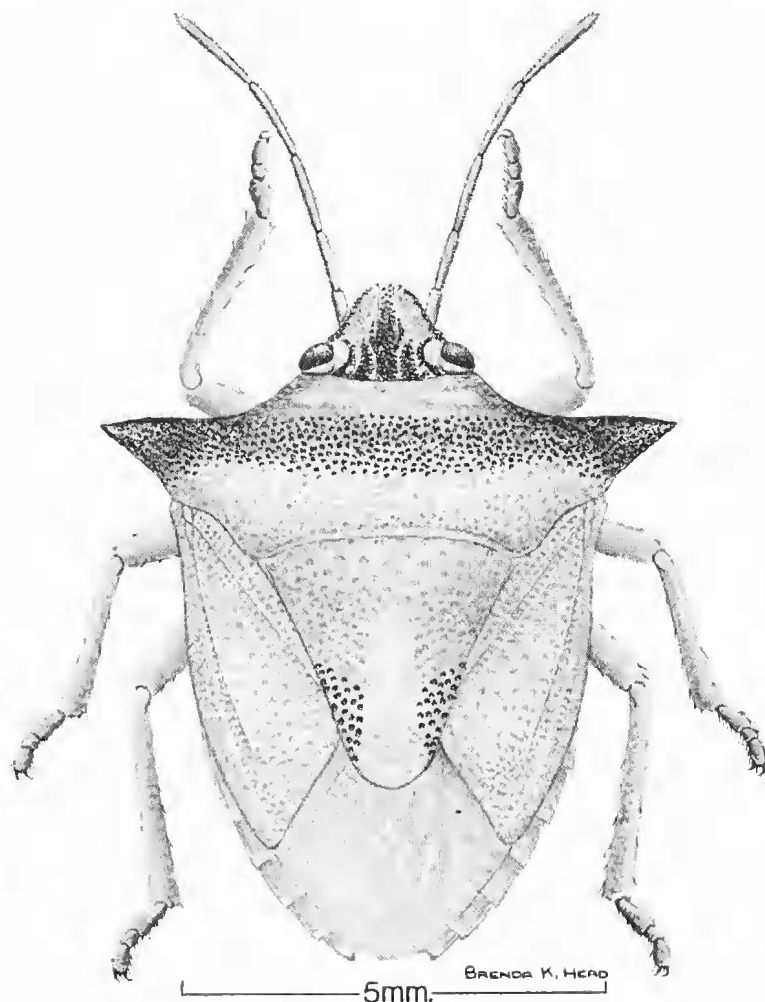


Fig. 37. Dorsal aspect of *Cuspicona thoracica* (Westwood).

but not reaching base of head, II slightly arched and reaching mid coxal, III to hind coxal and IV to middle of abdominal ventrite III. Ratio of antennal segments 9:16:19:20:21. Episterna, propleuron, hind portion of propleuron and metapleuron lightly and concolorously punctate. Metasternal-mesosternal keel reaching over apex of prosternum, higher anteriorly than posteriorly, its anterior margin only slightly convex, deflected to the left in ventral view. Femora normal, tibiae rather flattened exteriorly in apical quarter. Abdomen sparsely, finely and concolorously

punctate laterally and on external genitalia, medially impunctate, rounded in posterior view but ventrites V-III progressively more V-shaped. Apex of male abdomen Fig. 36 C, apical margin of pygophore rather truncate laterally, concavely excavate medially. Clasper Fig. 30 D, rather curved F-shaped. Medial penial plates of aedeagus Fig. 30 C, strongly Y-shaped, their ventral surfaces sinuate, gonopore opening between them. Apex of female abdomen Fig. 36 D, hind margins of first gonocoxal sinuated and vaguely oblique.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	30	29	1.6	5.4	27-34
Head width	31	34	1.2	3.6	32-37
Antennal segment I	46	9	0.6	7.0	7-10
Antennal segment II	48	16	1.3	7.8	14-18
Antennal segment III	48	20	1.1	5.8	18-22
Antennal segment IV	42	21	1.2	6.0	19-24
Antennal segment V	40	22	1.3	6.0	20-27
Pronotum width	31	104	3.4	3.2	99-112
Pronotum length	31	31	2.7	8.7	28-34
Total length	31	133	9.7	7.3	117-151

Dimensions—

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	36	32	2.3	7.0	28-39
Head width	36	37	1.7	4.7	31-40
Antennal segment	63	9	0.6	6.8	8-11
Antennal segment II	63	16	1.6	9.5	10-19
Antennal segment III	63	19	1.2	6.2	17-22
Antennal segment IV	56	20	1.5	7.3	18-25
Antennal segment V	50	21	1.2	5.7	19-25
Pronotum width	36	114	8.3	7.3	104-155
Pronotum length	36	33	2.6	7.9	29-39
Total length	36	145	9.2	6.3	130-165

Total length: 6.9-7.6 mm

Remarks: When work was part way on specimens labelled *thoracica* in most collections it was noticed that the series were made up of two very similar species which can be distinguished by the outline of the male pygophore, by the degree of black in the head in males, by whether the margins of the head are black spotted or not in females and the degree of posterior extension of the black punctations on the scutellum. As I was unaware of this when I examined the types of *thoracica* and

xanthochlora in England in 1969 it was necessary to call upon the good offices of Mr. I. Lansbury in the Hope Department at Oxford and Dr W. R. Dolling at the British Museum to recheck these types for me. They prove to be conspecific and to apply to this taxon. The second species is described hereunder and the differences between the two treated in the *Remarks* section there. *Cuspicona thoracica* occurs only near the coast in central and south-eastern Victoria, New South Wales and south-eastern Queensland.

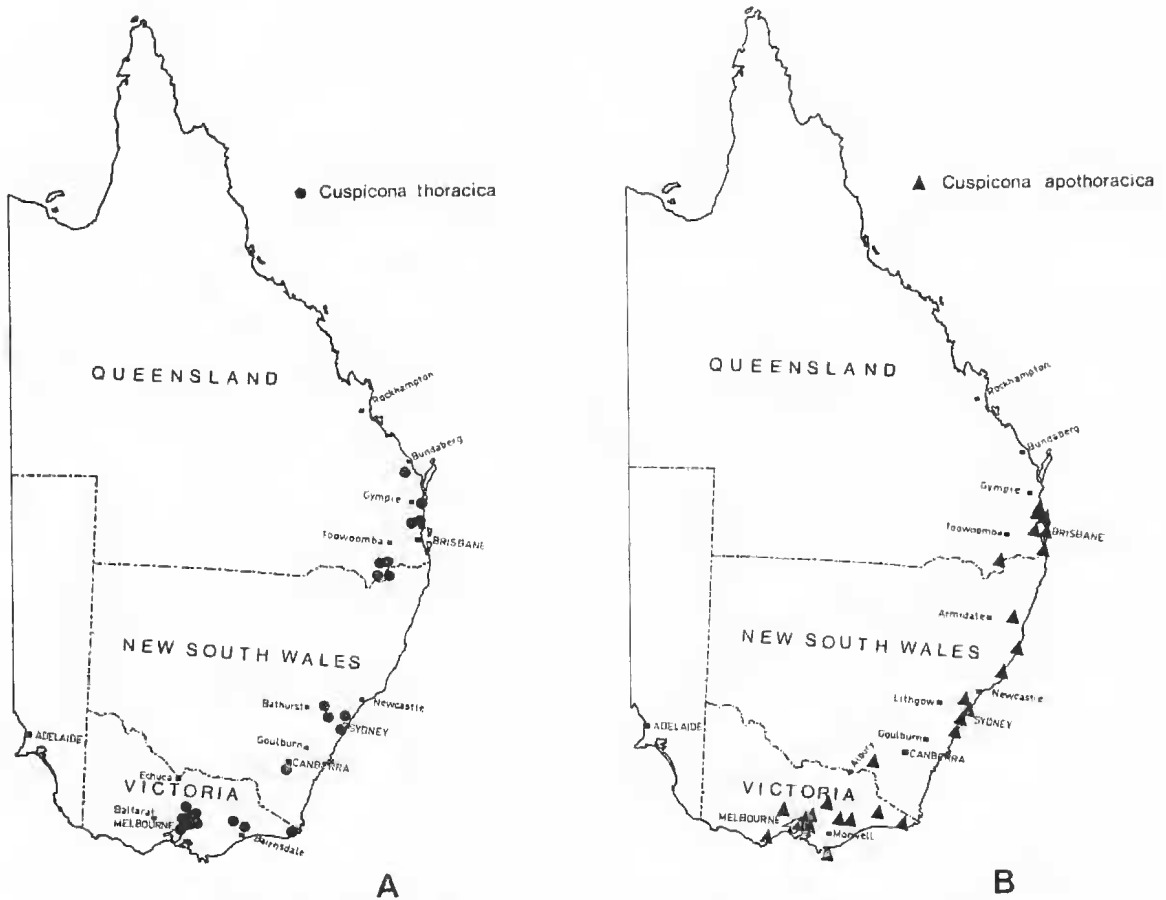


Fig. 38. *Cuspicona thoracica* (Westwood), *Cuspicona apothoracica* sp. nov. A. distribution of *Cuspicona thoracica*. B. distribution of *Cuspicona apothoracica*.

Location of types:

Holotype ♀ of *thoracica* Westwood, "New Holland", in Hope, holotype ♀ of *xanthochlora* Walker, "Australia", in BM.

Specimens Examined: About 140 examples were examined, their detailed distributions are not given but the distribution plotted on Fig. 38 A.

***Cuspicona apothoracica* sp. nov.**

Figs. 36 A-B, 38 B, 39, 40 A-C

Description:

General appearance: Very similar to *thoracica*. Grass green in life with dorsum of head, a broad transverse band on pronotum between and extending onto, produced lateral angles,

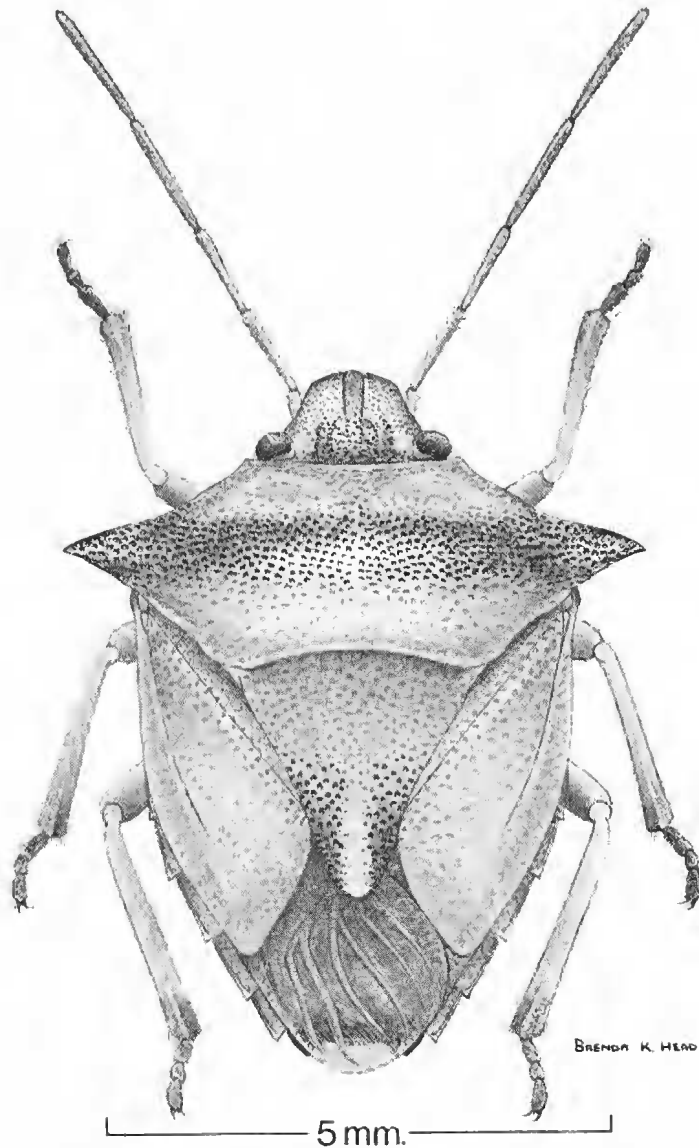


Fig. 39. Dorsal aspect of *Cuspicona apothoracica* sp. nov.

antennae, underside of head, rostrum, apices of tibiae, and tarsi brown. Basally on head, across transverse band on pronotum and laterally near apex of scutellum black punctate.

Head: Brown and slightly convex above; in both sexes black punctations restricted to three basal black longitudinal bars, if punctations present in front of anterior margins of eyes then

sparse and not reaching apex. Lateral margins and most of apical portion with concolorous punctations. Eyes and ocelli purplish red.

Pronotum: Green in life, yellowish or pale yellow brown in museum specimens; dorsal surface of lateral angles and a broad transverse band between them brown with numerous black punctations, this band of punctations about seven

punctations wide medially, anteriorly and posteriorly to this band finely and concolorously punctate except on glabrous calli. Anterior margin oblique behind eyes and deeply concave behind collum, anterolateral angles produced into a small tooth. Anterolateral margins obtuse, straight and diverging in anterior half; posterior half, with lateral angles, produced into a conical slightly recurved process directed outwards and only a little upwards, about 75 per cent length of posterolateral margin, its basal diameter about 50 per cent length of posterolateral margins. Posterolateral margins obtusangulately angulate and sinuate, posterior margin broadly convex.

Scutellum: Green in life with a broad orange-luteous median fascia in apical 2/5, in museum specimens the green areas change to yellow or yellowish brown. Laterally to apical pale streak an elongate triangular patch of black punctations on each side beginning at about base of pale streak and continued almost to apex, there tending to continue on to the apically rounded portion as a narrow band one or two punctations wide. No fovea at base of lateral margins, latter broadly convex in basal half, then broadly and slightly convex to rounded apex. Frena reaching past half length.

Hemelytra: Green in life, yellow in museum specimens, coarsely and concolorously punctate. Exterior margin of corium concave in basal quarter then broadly rounded to very shortly rounded apical angle, posterior margin nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Green in life, yellow in museum specimens, upper margins of male pygophore with some black markings.

Laterotergites: Concolorous, posterior exterior angles with a small reflexed spine.

Underside: Concolorous but in life head rather yellowish, abdomen medially towards base, thoracic sterna and their keels lightened in colour. Antennae, most of rostrum, apical half of pronotal spines, apices of tibiae, tarsi and pygophore brown. Rostrum ventrally and most of apical segment and pronotal spines apically black.

Bucculae not reaching base and not even to middle of eye, strongly sinuate, produced into an acute triangular lobe anteriorly. Rostral segment I robust, just surpassing apex of bucculae, II slightly arched and reaching mid coxae, III to hind coxae, IV to base of abdominal segment III. Ratio of antennal segments I-V 9 : 16 : 19 : 23 : 24. Episterna and epimera nearly glabrous, propleuron sparsely punctate anteriorly and posteriorly and with some black punctations on underside of pronotal spine, metapleuron punctate posteriorly. Metasternal-mesosternal keel reaching over apex of prosternum to apex of latter, higher anteriorly than posteriorly, its interior margin only slightly convex, deflected to the left in ventral view. Femora normal, tibiae rather flattened exteriorly in apical quarter. Abdomen fairly densely punctate laterally and more sparsely on female external genitalia, medially impunctate, rounded in posterior view but ventrites V-III progressively more V-shaped. Apex of male abdomen Fig. 36 A, apical margin of pygophore convexly rounded laterally and broadly concave medially. Clasper Fig. 40 C, rather F-shaped. Aedeagus Figs. 40 A-B, phallosoma only lightly sclerotized, conjunctiva produced apically into two tubular lobes which cross over each other in dorsal view, "lappet" processes elongate and directed downwards in their basal portion. Medial penial plates strongly inverted Y-shaped, their ventral surfaces sinuate, gonopore opening between them. Apex of female abdomen Fig. 36 B, hind margins of first gonocoxae faintly concave and rather oblique.

Dimensions—

MALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	25	34	1.4	3.9	32-38
Head width	25	36	1.3	3.5	34-39
Antennal segment I	34	9	0.4	4.3	8-10
Antennal segment II	32	16	1.0	6.3	14-17
Antennal segment III	32	19	1.1	5.6	15-21
Antennal segment IV	26	23	1.3	5.7	21-26
Antennal segment V	21	24	1.4	6.0	20-26
Pronotum width	25	104	5.4	5.2	99-125
Pronotum length	25	28	3.4	11.9	23-36
Total length	25	130	8.9	6.9	116-140

Dimensions—

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	32	37	1.5	4.0	34-39
Head width	32	38	1.1	2.8	37-41
Antennal segment I	37	9	0.2	2.6	8-10
Antennal segment II	40	15	1.2	8.1	13-18
Antennal segment III	40	18	1.4	7.7	16-21
Antennal segment IV	35	22	1.3	5.9	20-24
Antennal segment V	23	23	0.9	3.9	21-24
Pronotum width	32	113	5.0	4.4	106-128
Pronotum length	32	29	2.8	9.6	24-36
Total length	32	139	7.1	5.1	123-156

Total length: 6.0-8.1 mm

Remarks: *Cuspicona apothoracica* is very similar in appearance to *C. thoracica* and very easily confused with the latter. The salient differences are:—

thoracica

Head in males extensively marked with black punctations over most of dorsal surface and to lateral margins.

Head in females with dorsal black punctations basally and also submarginally. Scutellum in both sexes with a short triangular patch of black punctations on either side which do not reach near to apex.

Ratio of antennal segments I-V 9:16:19:20:21.

Posterior outline of male pygophore from below with a truncate or slightly concave lobe on either side separated by a concave area medially, the lateral and medial regions separated by an angle (Fig. 36 C).

apothoracica

Head in males usually only black punctate in region between eyes. If black punctations present in anterior portion of disc then sparse and marginal areas concolorously punctate.

Head in females with dorsal black punctations restricted to basal area, marginal areas concolorously punctate. Scutellum in both sexes with an elongate triangular patch of black punctations on either side which extend almost to apex of scutellum.

Ratio of antennal segments I-V 9:16:19:23:24.

Posterior outline of male pygophore from below with a convex lobe on either side running smoothly into a concave area medially (Fig. 36 A).

Apothoracica (Fig. 38 B) has almost the same distribution as *thoracica*, occurring only

near the coast in central and eastern Victoria, eastern New South Wales and south eastern Queensland.

Location of types:

Holotype δ , Acacia Ridge, Brisbane, Queensland, 17.IX.1964, A. Neboiss; paratypes:— δ , Burleigh, Queensland, 28.IX.1960, A. N. Burns; φ , same locality and collector, 18.IX.1960; φ , North Queensland, from C. French Jun., 19.XI.1911; δ , Buchan, Victoria, Oct. 1907, N. V. Leach; 2 δ , Thurra River, Cape Everard, Victoria, 29.X.1970, A. Neboiss; φ , 17 km S.E. of Merrijig on 8 Mile Creek off Howqua River, Victoria, 1.XII.1971, A. Neboiss; φ , Montrose, Victoria, 25.XI.1945, P.B.; φ , Beaconsfield, Victoria, 8.XII.1933, G. F. Hill; 2 φ , Ringwood, Victoria NM; allotype φ (Reg. No. 120,678), Glenmaggie Weir, Victoria, 14.IV.1957, F. E. Wilson; paratypes:— φ (Reg. No. 120,679), by sweeping, 1.6 km west of Apollo Bay, Victoria, 19.I.1962, G. F. Gross; φ (Reg. No. 120,680), Seaford, Victoria, W. F. Hill; 2 φ , (Reg. Nos. 120,681-2), Bribie Island in Moreton Bay, Queensland, Lea and Hacker SAM; δ , Brisbane, Queensland, 6.X.1914, H. Hacker; 3 δ , 1 φ , Birkdale, Brisbane, Queensland, 7.IX.1926, H. Hacker; φ , Stanthorpe, Queensland, 26.X.1930, E. Sutton OM; δ , Glen Aplin, Queensland, 4.VII.1964, P. Kerridge; φ , Nth. Stradbroke Island, Queensland, 20.IV.1968, T. Weir; δ , Caloundra, Queensland, 21.III.1972, G. B. Monteith; δ , on *Leptospermum*, Tibrogargan Creek, Queensland, 4.IX.1953, T. E. Woodward UQ; δ , Pt. Macquarie, New South Wales, 25 Aug.-14 Sept. 1941, H. W. Simmonds; δ , La Perouse, Sydney, New South Wales, G. H. Hardy; δ , Sylvania, New South Wales, Oct. 1934, Dr. K. K. Spence AM; 1 δ , 3 paratype φ , Mannus near Tumbarumba, New South Wales, 1.XII.1930, T. G. Campbell; φ , 18 km south of Forster, New South Wales, 17.X.1956, P. B. Carne; φ , Blundells,

Australian Capital Territory, T. G. Campbell; ♂, 6 km north of Briagolong, Victoria, 13.XII.1949, T. G. Campbell, ♀, shaken from *Hakea sericea* Schrad, Mount Oberon, Wilson's Promontory, Victoria, 5.IX.1967, S. Nesar; ♀, shaken from *Hakea sericea* Schrad in flower. Story Creek, Cann River, Victoria, 9.IX.1967, S. Nesar ANIC; ♂, Brisbane, Queensland, 4.IX.1914, H. Hacker, Brit. Mus. 1923-313; ♀, North Narrabeen, New South Wales, 27.X.1957, M. I. Nikitin; ♀, cliff over Pacific Ocean, North Narrabeen, New South Wales, 13.II.1960, B.M. 1960-619; ♀, Bulli Pass, New

South Wales, 20.XI.1948, E. B. Britton; ♀, by net sweeping on river banks, Loddun River near Bulli, New South Wales, 1.X.1959, N. Nikitin BM 1960-203; ♀, Dorrigo, New South Wales, W. Heron, BM 1935-46; ♀, Sydney, New South Wales, Distant Coll. 1911-383; ♀, New South Wales, presented by Perth Museum B.M. 1953-629; ♀, unlocalised BM; ♀, New South Wales AMNH; 7 ♂, 5 ♀, Brisbane, 1910, Sept. 1915 and 15.IX.1915, ex Bridwell Coll.; 2 ♂, Stradbroke Island, Moreton Bay, Queensland, 20.IX.1915, J. C. Bridwell; 1 ♂, 1 ♀, Botany Bay, New South Wales, H. Petersen, ex C. F.

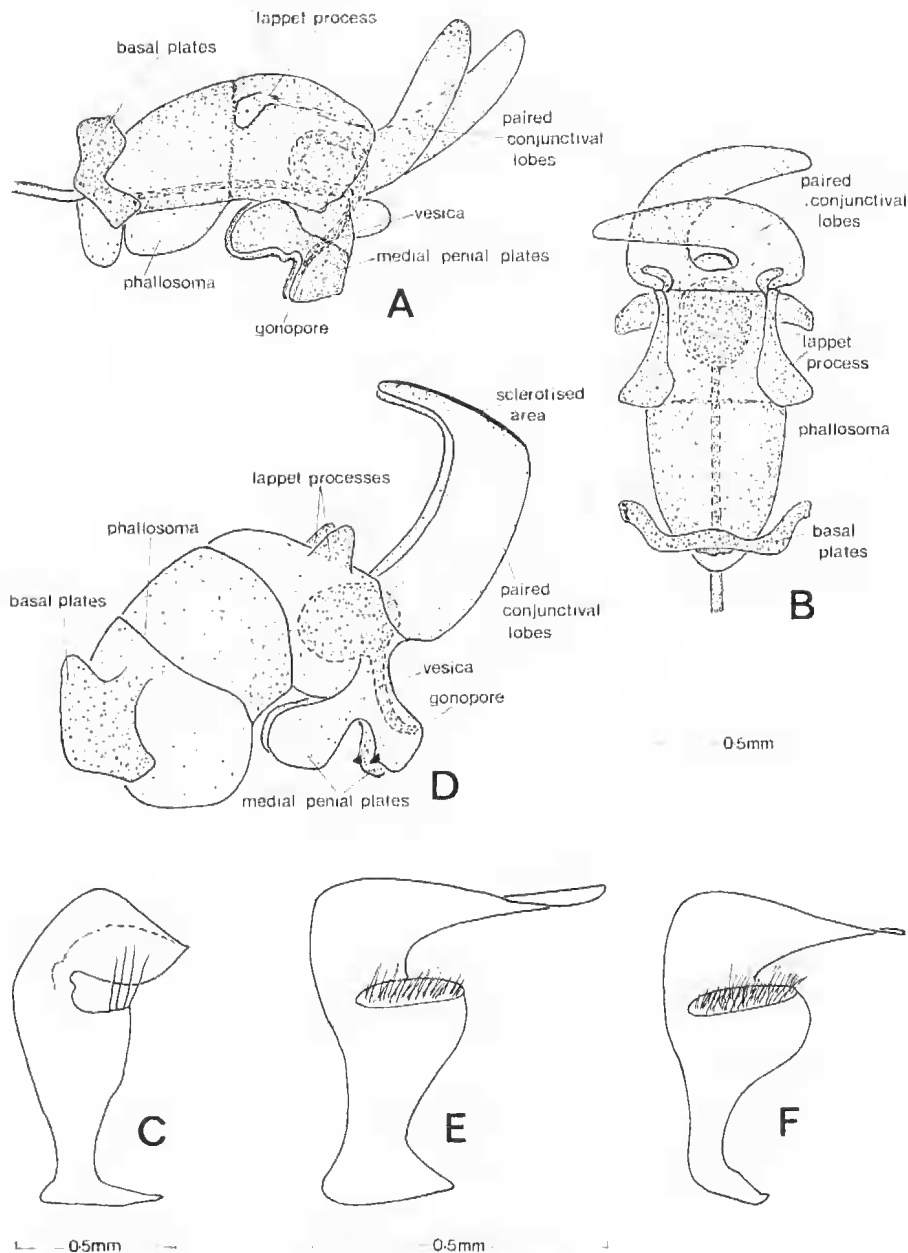


Fig. 40. *Cuspicona apothoracica* sp. nov., *Cuspicona strenuella* Walker. A-C. *Cuspicona apothoracica*. A. left-hand aspect of aedeagus. B. dorsal aspect of aedeagus. C. clasper. D-F. *Cuspicona strenuella*. D. left-hand aspect of aedeagus. E. clasper of usual individual. F. clasper of rather unusual Queensland example.

Baker Coll. 1927; ♂, National Park, New South Wales, 15.II.1957, W. W. Wirth; ♂, Bacchus Marsh, Victoria, ex G. W. Kirkaldy Coll, 1919 USNM; ♀, Stradbroke Island, Queensland, 2.X.1911, H. Hacker; ♀, Brisbane, Queensland, 10.VIII.1913, H. Hacker KU; 2 ♀, Sydney, New South Wales, Oct. 1903, ex Helms Coll. 1 ♂, 2 ♀♀, National Park, New South Wales, Dec. 1905, ex Helms Coll. BISHOP.

Specimens examined: The type series only.

***Cuspicona strenuella* Walker, 1867**

Figs. 40 D-F, 41, 43 E-F

Cuspicona strenuella Walker, 1868, p. 572.

Cuspicona beutenmülleri Van Duzce, 1905, p. 208, pl. 8, Fig. 10. *New synonym.*

Description:

General appearance: Ground colour rather greenish brown in life with anterior half of scutellum, corium, clavus, a patch on propleuron,

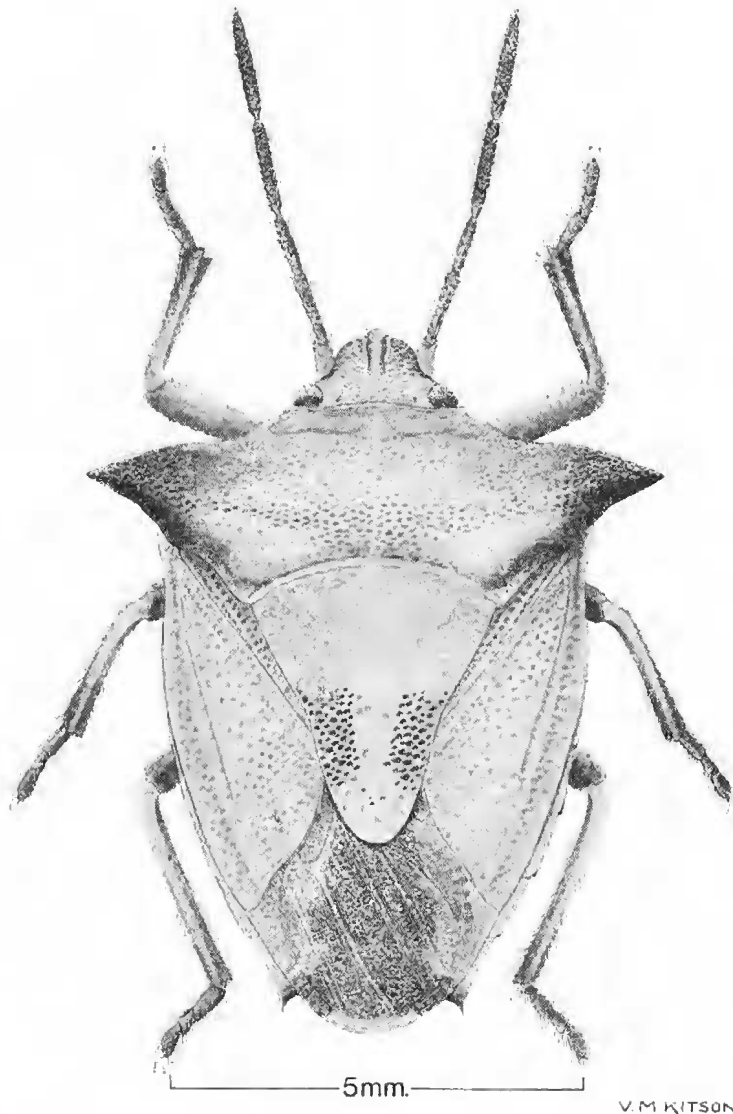


Fig. 41. Dorsal aspect of *Cuspicona strenuella* Walker.

tibiae medially, embolium and abdomen (laterally) green. Lateral angles of pronotum produced into conical spines, latter black punctate and infuscated towards apices; black punctations in two patches laterally near middle of scutellum; femora maculated with brown.

Head: Greenish brown, evenly punctate; eyes and ocelli reddish or purplish. Lateral margins frequently with black punctations,

Pronotum: Greenish brown, anterolateral margins frequently with black punctations. Spinous lateral angles infuscated towards apices, dark punctate in their basal posterior portions, occasionally these punctations extending transversely across pronotal disc as a narrow band two or three punctations wide, more frequently a quadrate patch of black punctations medially near posterior margin. On each side from base of

each lateral spine an oblique luteous fascia reaching posterior margin near middle. Anterior margin oblique behind eyes and sinuously excavate behind collum. Lateral margins straight or slightly convex and diverging posteriorly in anterior half; posterior half, with lateral angles, produced into a conical, slightly recurved spinous process directed outwards and upwards, about as long as posterolateral margin, its basal diameter rather less than length of posterolateral margin. Posterolateral margins slightly angulately concave, posterior margin broadly concave,

Scutellum: In life anterior half green and posterior half luteous, medianly luteous produced forward a little into the green. On either side of scutellum a quadrate patch of dark punctations, their centre just behind midlength of lateral margins, some sparse dark punctations in apical portion. No fovea at base of lateral margins, latter broadly convex in basal third, then very broadly and slightly convex to broadly rounded apex. Frena reaching about half length.

Hemelytra: Coriaceous parts green in life, rather sparsely and coarsely punctate. Exterior margin of corium concave in basal quarter then broadly rounded to shortly rounded apical angle, posterior margin nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Reddish green above with a medial broad black stripe extending back from well before apex of scutellum, genital segment black and reddish green above.

Laterotergites: Green in life, posterior margin of VIIIth narrowly black. Posterior exterior angles of all segments nearly rectangular with only a fine short spine.

Underside: Luteous; a callous green patch on propleuron just behind eye and narrower than latter, extending back only a little more than half length of segment, most of basal 2/3 of tibiae (except extreme bases), a triangular patch in posterior portion of metapleuron and a broad lateral band on abdomen with its inner edge irregular also green, in males also a dark patch, perhaps green in life, more ventrally on either side and extending over ventrites III-V, separated from the lateral patch by a narrow

luteous bar. Antennal segments II-V darker, II-III strongly maculated with brown as are femora and tibiae of last two pairs of legs. Fore femora and tibiae less densely maculated. A bar on the dorsal surface of antennifer and another along base of bucculae frequently black as are ventral surface and most of last segment of rostrum and a series of lateral spots, one each at outer ends of sutures between episterna and epimera and one each on abdominal segments IV-VII, just behind each suture. Sometimes more ventral spots on the fourth and fifth ventrites. Mesosternal keel hyaline, metasternal keel sometimes darker.

Bucculae not quite reaching base of head, strongly sinuate, produced into an obtuse lobe anteriorly. Rostral segment I robust, surpassing bucculae and reaching to anterior portion of prosternum; segment II compressed and curved, reaching to mid coxae; segment III reaching hind coxae and IV onto IIIrd abdominal ventrite. Ratio of antennal segments 10:17:17:24:25. Proepisterna and proepimera and posterior outer portion or propleuron lightly punctate with reddish black, mesepisterna and metepisterna lightly punctate with fuscous as is extreme hind margin of metapleuron. Mesosternal keel projecting over prosternum to a little past its apex, higher and thinner anteriorly, deflected to left anteriorly in ventral view. Femora normal, tibiae rather flattened exteriorly in their apical third. Abdomen impunctate except on external genitalia but rather finely rugulose, rounded in posterior view but ventrites VI-III progressively more carinate. Apex of male abdomen Fig. 43 E, apical margin of pygophore sinuate and medianly rather rectangularly excavate, slightly reflexed. Clasper Fig. 40 E-F, strongly F-shaped. Aedeagus Fig. 40 D, phallosoma only lightly sclerotized; conjunctiva produced apically into two paralleled tubular lobes directed rather upwards and apically constricted, their posterior margins in the constricted region sclerotized: "lappet" processes small, medial penial plates shaped like an inverted Y, a small tooth on posterior margins of interior branches, Gonopore located between them. Apex of female abdomen Fig. 43 F, hind margins of first gonocoxae transverse but "stepped", the inner halves lying more anteriorly than the outer sections.

Dimensions—

MALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	14	38	2.0	5.4	35-42
Head width	14	39	0.8	2.1	38-40
Antennal segment I	20	10	0.7	6.8	8-10
Antennal segment II	21	17	1.5	8.8	15-20
Antennal segment III	21	17	1.1	6.2	15-19
Antennal segment IV	12	25	1.1	4.2	23-27
Antennal segment V	9	26	1.5	5.7	24-28
Pronotum width	14	129	7.6	5.9	120-140
Pronotum length	14	32	2.6	8.1	26-35
Total length	13	159	9.5	6.0	140-177

FEMALES					
Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	25	41	2.8	6.8	33-44
Head width	25	41	1.6	3.9	37-44
Antennal segment I	38	10	0.7	7.3	8-11
Antennal segment II	38	18	1.5	8.2	15-20
Antennal segment III	38	16	1.6	10.2	13-20
Antennal segment IV	26	24	1.7	7.2	20-28
Antennal segment V	22	24	1.6	6.7	21-28
Pronotum width	25	138	8.8	6.4	121-152
Pronotum length	25	37	3.9	10.7	31-43
Total length	25	175	12.5	7.2	155-210

Total length: 7.3-10.9 mm

Remarks: One male Queensland specimen to hand of this species is rather smaller than the other material, the pronotum anteriorly has a longitudinal pale callus and the shape of the clasper appears to be rather different to that seen in the other specimens dissected. This Queensland form may represent a distinct subspecies but one specimen is not adequate to determine that this is so. Consequently it is not so considered here, the dimensions of this male is: head length 36; head width 36; antennal segment I 8; antennal segment II 18; antennal segment III 13; antennal segment IV 25; antennal segment V 27; pronotum width 115; pronotum length 30; total length 139 (7.2 mm.).

The types of both *strenuella* Walker and *beutenmülleri* Van Duzee have been examined, and, although females, clearly represent this one species.

Location of types:

Type ♀ of *strenuella*, Walker, without locality BM; type ♀ of *beutenmülleri* Van Duzee, "Victoria", AMNH.

Specimens Examined: Queensland ♂, Mt. Norman area via Wallangarra, 7-8.X.1972, G. B. & S. R. Monteith UQ; 3 ♂, unlocalised, from C. French Jun. 15.XI.1911 NM; New South Wales 1 ♀, Ebër, 3.XII.1915 QM; 1 ♀,

Jindabyne, 1 000 m, Mar. 1889, Helms; 1 ♀, Mannus near Tumberumba, 1.XII.1950, T. G. Campbell; 1 ♂, Dorrigo, Feb. 1929, W. Heron, K 59373, AM; 2 ♂, Abercrombie River, 80 km north of Goulburn, 27.XI.1967, Britton and Misko ANIC; 3 ♀, Dorrigo SAM; 2 ♀, The Dorrigo, 1 000 m, W. Heron; 1 ♀, near Sydney, Wheeler AMNH; 1 ♀, 3 km west of Kioloa, 90 m, 17.XII.1962, E. S. Ross & D. O. Cavagnaro CA; 1 ♂ National Park, 29.IX.1902, Helms Collection, Bishop; Australian Capital Territory 4 ♂, 1 ♀, Blundells, 30.III.1930, T. G. Campbell; 1 ♀, Blundells, 30.VIII.1933, T. G. Campbell ANIC; Victoria 1 ♂, Emerald, Sept. 1930, J. Evans ANIC; 3 ♀, Ringwood; 1 ♀, Trafalgar, 9.VI.1930, F. E. Wilson; 1 ♀, Murrindini, 24.III.1971, A. Neboiss; 1 ♂, Wallan, 25.XII.1956, F. Hallgarten, NM; 1 ♂, Croydon, 24.XII.1948, N. B. Tindale; 1 ♀, Port Campbell, Nov. 1959, G. F. Gross SAM; 1 ♀, Launching Place, 17.I.1905, Bueno via Van Duzee Collection CA; Tasmania 1 ♀, Dulverton, Mar. 1972 ANIC; South Australia 1 ♀, Mylor, J. Formby, K56187 AM; 1 ♀, Glen Stuart, 9.XII.1893, Tepper; 1 ♂, Magill, 13.X.1883, on *Aster* sp, Tepper; 1 ♀, no locality or date, Rev. A. P. Burgess SAM; 1 ♂, 1 ♀, no other data AMNH; Unlocalised 1 ♂; 1 ♀, ex C. French Jun. 15.XI.1911 NM; 1 ♀, Austral bor., Thorey; 1 ♀, Australia, Boutard; 1 ♀, Nov. Holl., Ekeberg, Stockholm.

***Cuspicona longispina* sp. nov.**

Figs. 42, 43 C-D.

Description:

General appearance: Ground colour green in life with head and antennae, most of pronotum, apical half of scutellum, dorsum of abdomen, brownish, yellowish or cream coloured as also on underside of head, rostrum, most of prothorax, half of mesothorax, ventral regions of metathorax and abdomen, bases of femora and apices of tibiae. Head and anterior part of pronotum strongly deflexed. Lateral angles of pronotum produced into long spines, on dorsal surface of spines and across disc of pronotum between spines a band of black punctates five or more punctations wide.

Head: Brownish yellow, extreme lateral margins with some blackish punctations, eyes and

ocelli purplish red. Disc evenly and finely punctate, rather raised medially, more so towards base than apex.

Pronotum: Brownish with apices of lateral spines black and a broad row of punctations on spines basal to black tips and then running transversely across pronotum black, this row more than five punctations wide in centre of disc. In fresh specimens a green trapezium shaped patch anteriorly not reaching anterior or lateral margins, calli glabrous, located in the green area. Anterior margin oblique behind eyes and rather rectangularly excavate behind collum. Antero-lateral margins straight, obtuse, and diverging posteriorly in anterior half; posterior half, with lateral angles, produced into a long, conical acute tipped spinous process which is directed outwards and somewhat upwards, these spines about 50 per cent longer than posterolateral

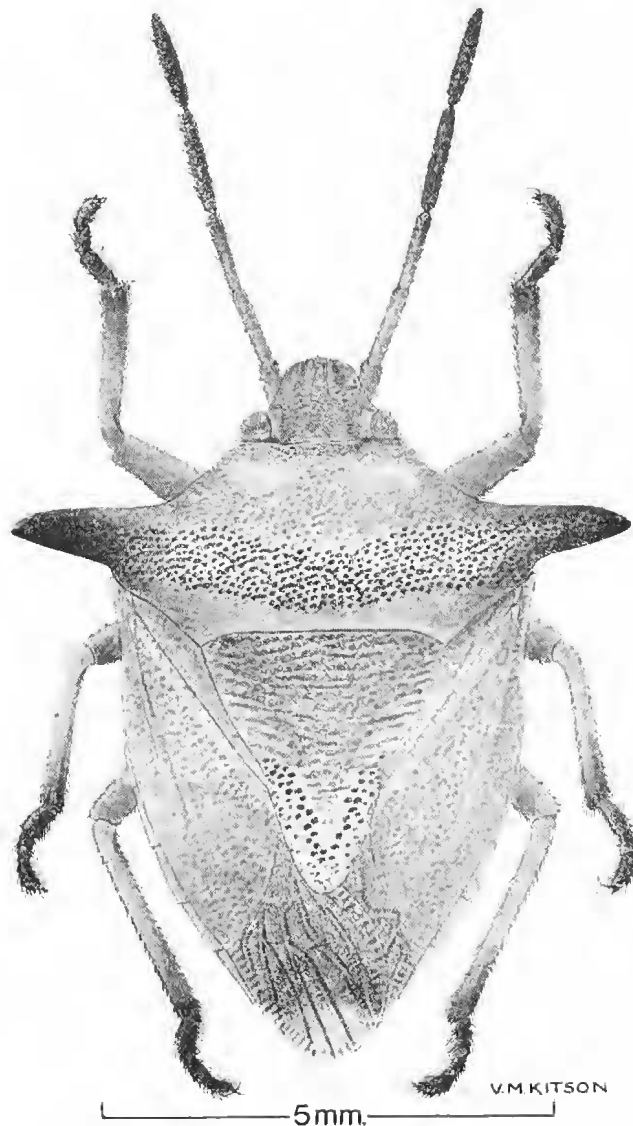


Fig. 42. Dorsal aspect of *Cuspicona longispina* sp. nov.

margins, their basal diameters about 25 per cent less than length of posterolateral margins. Posterolateral margins obtusangulately concave, posterior margins broadly concave.

Scutellum: In fresh specimens a basal green triangular patch more or less in the shape of scutellum itself but not reaching lateral margins nor further than three quarters of the length, laterally to this bright yellow, in posterior third to one quarter of scutellum cream coloured with coarse black punctations tending to be concentrated near midline. No fovea at base of lateral margins, latter broadly convex in basal half then almost straight to broadly lanceolate apex. Disc only slightly raised basally. Frena reaching about half length.

Hemelytra: Coriaceous parts green in life, fading to brown in museum specimens, coarsely punctate. Slightly narrower than abdomen in apical two thirds; exterior margin of corium concave in basal quarter then broadly convex to nearly acute apical angle, posterior margin of corium nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: Not clearly seen in any of the specimens but apparently brownish yellow with some paired black marks behind apex of scutellum.

Laterotergites: Green in life, posterior exterior angles of segments nearly rectangular.

Underside: Head, first, second and most of third antennal segments and most of rostrum brownish yellow; apex of third antennal and fourth and fifth antennal segments brown; rostrum ventrally and most of its apical segment black, a reddish patch ventrally near base of second segment. Prothorax rather cream coloured with black spots coarse on underside of lateral spines and less dense on propleuron. Above proepisternum and proepimeron a glabrous concolorous patch and exterior to this a rhomboidal callous green patch reaching to anterior margin, almost to exterior margin but widely separated from posterior margin. Mesothorax mostly cream coloured with posteriorly a narrow nearly quadrate green patch reaching exterior margin. Metathorax broadly cream coloured ventrally, laterally green, the inner margin of this green in line with inner margin of green mesothoracic patch. Metasternal-mesosternal keel semihyaline. Coxae and bases of femora cream coloured, rest of femora and bases of tibiae green, apical 2/5 of tibiae yellow,

tarsi and claws brown. Abdomen with whole external genitalia broadly pale cream coloured medially, laterally green.

Bucculae reaching base of head, convexly curved, produced into a rather triangular lobe anteriorly. Rostral segment I robust, reaching base of head, segment II arched and reaching mid coxae, segment III to base of abdomen and IV to base of abdominal ventrite V. Ratio of antennal segments 9:17:16:22:22. Propleuron sparsely punctate except on green area, mesopleuron sparsely punctate on mesepisternum, metapleuron sparsely punctate on metepisternum. Metasternal-mesosternal keel projecting over prosternum to a little past its apex, higher and thinner anteriorly, deflected a little to left anteriorly in ventral view. Femora normal, tibiae slightly flattened apically on exterior surface. Abdomen impunctate, rather rounded in posterior view but ventrites VI-III progressively more carinate ventrally. Apex of male abdomen Fig. 43 C, pygophore with posterior margin shallowly concave in middle, laterally slightly sinuate, rather broadly and slightly reflexed. Apex of female abdomen Fig. 43 D, posterior margins of first gonocoxae sinuate, paratergites XI almost triangular.

Dimensions—

	Holotype ♂	Paratype Males (Average of 6)	Paratype Females (Average of 6)
Head length	37	36	39
Head width	37	37	37
Antennal segment I	8	9	9
Antennal segment II	17	18	17
Antennal segment III	16	16	15
Antennal segment IV	21	22	22
Antennal segment V	33	23	21
Pronotum width	135	130	138
Pronotum length	32	30	35
Total length	145	139	145

Total length: 6.0-7.8 mm

Remarks: This species is rather similar to *thoracica* but differs in the much longer lateral spines on the pronotum, in the laterally green and ventrally luteous abdomen, the different shape of the male pygophore and the lack of black punctations on the disc of the head. It appears to replace *thoracica* and *apothoracica* in South Australia and Western Victoria.

Location of types:

Holotype ♂, 1 paratype ♂, North Beach, Wallaroo, South Australia, by beating flowering ti-tree (*Melaleuca* sp.), 12.II.1964, G. F. Gross SAM 120,633-4; allotype ♀, 1 paratype ♀, 6 km east of Two Wells, South Australia, beaten from

Melaleuca lanceolata Otto, 7.VII.1971, A. N. McFarland SAM 120,665-6; 1 paratype ♂, 1 paratype ♀, 6 km east of Two Wells, South Australia on *Callitris preissii* Miq., 6.IV.1968, A. N. McFarland SAM 120,667-8; 1 paratype ♂, approx. 5 km east of Two Wells, South Australia, on *Melaleuca*, 27.VIII.1966, A. N. McFarland SAM 120,669; 1 paratype ♂, Yarcowie, 26.IV.1894, H. Mayer SAM 120,670; 1 paratype ♂,

Summit of Hummocks Mount, in dense under-scrub and trees, 30.V.1968, H. M. Cooper SAM 120,671; 1 paratype ♂, 1 paratype ♀, Murray River South Australia, H. S. Cope AM; 1 paratype ♀, Purnong on Murray River South Australia; 1 paratype ♀. Mallee, Northwest Victoria, donated 5.X.1922 F. P. Spry NM.

Specimens examined: The types only.

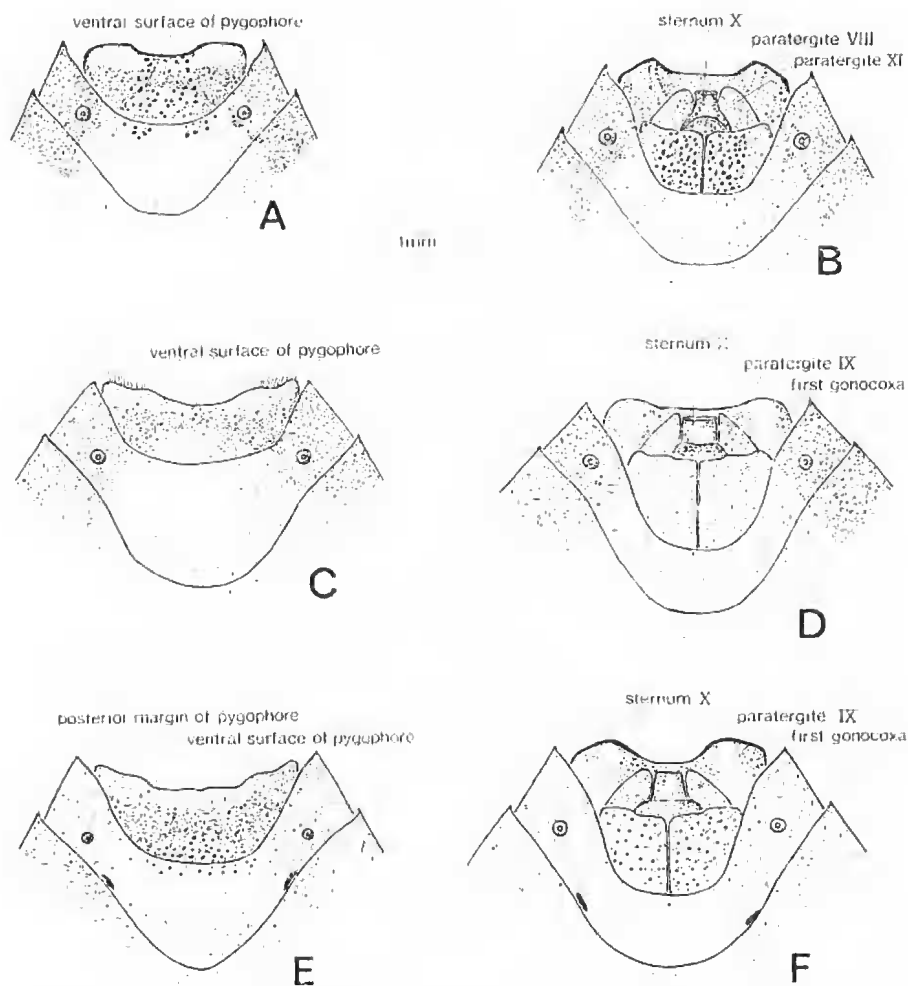


Fig. 43. *Cuspicona cygniterrae* sp. nov., *Cuspicona longispina* sp. nov., *Cuspicona strennella* Walker. A-B. *Cuspicona cygniterrae*. A. ventral aspect of male abdomen. B. ventral aspect of female abdomen. C-D. *Cuspicona longispina*. C. ventral aspect of male abdomen. D. ventral aspect of female abdomen. E-F. *Cuspicona strennella*. E. ventral aspect of male abdomen. F. ventral aspect of female abdomen.

***Cuspicona cygniterrae* sp. nov.**

Figs. 43 A-B, 44.

Description:

General appearance: Ground colour brown in life with anterior half of scutellum, corium, clavus, laterotergites, legs (except apices of tibiae and tarsi), a patch on propleuron, and outer margin of abdomen (broadly) bright green. Rest of underside creamy coloured. Lateral angles of pronotum produced into long spines.

Head: Yellowish or greenish brown, evenly punctate; eyes and ocelli reddish or purplish. Relatively long in relation to its width.

Pronotum: Brown, apices of lateral angles black or reddish black, punctations reddish black, a broad longitudinal raised area in anterior half and calli glabrous, yellowish. Anterior margin oblique behind eyes and rather rectangularly excavate behind collum. Lateral margins straight and diverging posteriorly in anterior half, posterior half with lateral angles produced into a

long, conical, acute-tipped spinous process up to about 75 per cent longer than posterolateral margin, its basal diameter about the same as length of posterolateral margin. Posterolateral margin only faintly concave, posterior margin broadly concave.

Scutellum: In life anteriorly greenish and posteriorly brown, normal length, raised basally and nearly flat in apical two thirds. No, or only a minute fovea at base of lateral margins, latter broadly convex in basal third, then very broadly and slightly convex to broadly rounded apex. Punctations rather sparse and concolorous in anterior portion and in midline in medial third, laterally a dense patch of reddish black punctations near middle, in apical quarter punctations sparse but reddish black. Frena reaching about half length.

Hemelytra: Coriaceous parts green in life, yellowish brown in museum specimens, rather

sparsely and coarsely punctate, depressed and silvery glabrous just exterior to medial fracture. Narrower than abdomen in apical three quarters; exterior margin of corium concave in basal quarter then broadly rounded to shortly rounded apical angle, posterior margin of corium nearly straight, inner angle broadly rounded. Clavus elongate triangular. Membrane and veins hyaline.

Abdomen: In museum specimens anteriorly and laterally yellowish; medially (behind apex of scutellum) a black spot, then reddish to apex with some black patches margining the reddish.

Laterotergites: Yellowish or green, posterior margin of VIIth narrowly reddish black. Posterior lateral angles of all segments rather blunt.

Underside: Head, antennae and rostrum yellowish brown, latter darker ventrally and with terminal segment black in apical half. Thorax

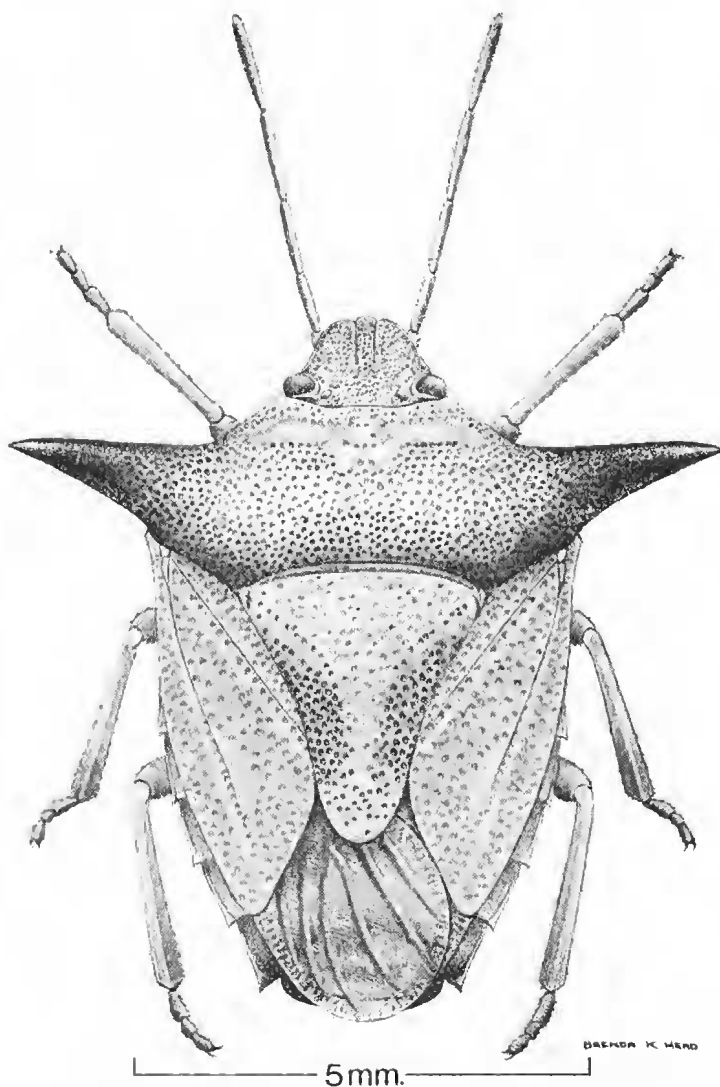


Fig. 44. Dorsal aspect of *Cuspicona cygniterrae* sp. nov.

and abdomen yellow but green areas as follows: femora and basal 2/3 of tibiae, a rather quadrate glabrous patch on propleuron behind eye but not reaching posterior margin of propleuron, a triangular region along outer portion of hind margin of metapleuron which extends forward on this segment as lateral margin is approached, a broad lateral band on abdomen with its interior edge sinuated. Tarsal claws black, apical half of lateral spine red, infuscated towards apex, metasternal-mesosternal keel hyaline. Pale portion of abdominal venter with faint pink maculations. In males medially on ventrite VII near its apex some black spots and apical margin and red markings. Female with reddish black spots on first gonocoxae and pale reddish marks on rest of external genitalia, hind margins of paratergite VIII lateral to median incision narrowly black.

Bucculae not reaching base of head, sinuate, produced into an obtuse lobe anteriorly. Rostral segment I robust, surpassing bucculae and reaching base of head, segment II reaching about middle of mid coxae, segment III to base of abdomen and IV to base of IVth abdominal ventrite. Ratio of antennal segments 9 : 15 : 13 : 21:21. Propleuron sparsely punctate on mesepisternum and mesepimeron along posterior margin, on underside of lateral spine strongly punctate, mesopleuron punctate only on mesepisternum, metapleuron punctate on episternum, epimeron and along posterior margin. Metasternal-mesosternal keel projecting over prosternum to a little past its apex, higher and thinner anteriorly, deflected to the left anteriorly in ventral view. Femora normal, tibiae rather flattened exteriorly in their apical third. Abdomen impunctate save where previously indicated, rather rounded in posterior view but ventrites V-III progressively more carinate medianly. Apex of male abdomen Fig. 43 A, pygophore with posterior margin medianly rather rectangularly excavate, posterior margin rather broadly and slightly reflexed. Apex of female abdomen Fig. 43 B, posterior margins of first gonocoxae rather concave.

Dimensions—

Parameter	Males (average of 2)	Females (average of 5)
Head length	32	37
Head width	34	36
Antennal segment I	9	9
Antennal segment II	16	15
Antennal segment III	11	14
Antennal segment IV	21	21
Antennal segment V	21	21
Pronotum width	128	137
Pronotum length	25	27
Total length	126	147

Total length: 6.6-7.6 mm

Remarks: *C. cygniterrae* resembles rather closely *C. longispina* in general appearance and in the possession of very long produced lateral angles of the pronotum. It is however distinguished from that species by not having a conspicuous transverse dark band of punctations running across the pronotum between the lateral angles, by having a conspicuous patch of dark punctations on either side of the scutellum near its middle and by the more rectangularly excised hind margin of the pygophore.

C. cygniterrae, like *C. longispina*, also resembles *C. strenuella* but has longer lateral spines on the pronotum and differently shaped external genitalia. *C. cygniterrae* appears to occur only in Western Australia whereas *C. longispina* is found in South Australia and Western Victoria and *C. strenuella* ranges from South Australia to Queensland. The Thomas River specimen of *cygniterrae* has shorter lateral spines on the pronotum than the other examples.

Location of Types:

Holotype ♀, Kalamunda, Western Australia, 3.IV.1963, J. Dell WAM; 1 paratype ♀, Thomas River 100 km east of Esperance at 33° 51' S 121° 53' E, Western Australia, 20.XI.1969, E. B. Britton ANIC; allotype ♂, 1 paratype ♀, Mt. William, Western Australia, 250 m, 6.XI.1963, J. Sedlacek Bishop; 1 paratype ♂, 1 paratype ♀, Swan River, L. J. Newman BM; 1 paratype ♂, 1 paratype ♀, Serpentine Dam near Jarrahdale, Western Australia 9.XII.1971, on *Agonis linearifolia* (DC) Schau, J. A. Slater in J. A. Slater Collection, Storrs, Connecticut, U.S.A.

Specimens Examined: The types only.

Simplex Group

The *simplex* Group of species includes a group of species ranging from the Philippines through Indonesia and New Guinea to Australia, New Zealand, Norfolk Island, New Caledonia and the New Hebrides. The species in this group are nearly completely grass-green in life with perhaps pinkish or reddish lateral angles of the pronotum and sometimes several of the other lateral margins as well. In museum collections most specimens fade to a characteristic light yellow colour with the pink areas persistent in colour. The lateral angles of the pronotum may be rounded (*privata*), obliquely truncate (*norfolcensis*), acute (*simplex*) or produced as a rather conical spine (*forticornis*). The hind margin of the corium is convex.

In all of the species the first gonocoxae of the female do not have a transverse or slightly concave posterior margin but instead this margin is produced posteriorly in its inner half, sometimes gently, sometimes almost rhomboidally.

There is a small but varied list of host plants from which members of this group have been captured but only plants of the family Solanaceae have been recorded more than once and in their ease for four of the eight species of this group which occur in the area covered by this paper.

Further work on the male aedeagus pattern in *Cuspicona* may reveal that this group of species should perhaps be placed into a new genus of their own. However the dissections which could be done on members of the group do not reveal any apparent major differences from earlier mentioned species of *Cuspicona* and so far as

I have been able to see nothing of the order of differences which distinguish *Ocirrhoe* species from species of *Cuspicona*.

***Cuspicona privata* Walker, 1867**

Figs. 45, 46 A-D, 48 A-B.

Pentatoma viride Montrouzier, 1855, p. 98 (pre-occupied by *Pentatoma viridis* Palisot de Beauville, 1811).

Cuspicona viridis Montrouzier and Signoret, 1861, p. 65. Stål, 1866, p. 156; 1876, p. 102. Lethierry and Severin, 1893, p. 181. Distant, 1920, p. 146.

Cuspicona privata Walker, 1867, p. 382. *New synonym but oldest available name.*

Cuspicona laminata Stål, 1876, p. 102. Lethierry and Severin, 1893, p. 180. Kirkaldy, 1905, p. 357. *New synonym.*

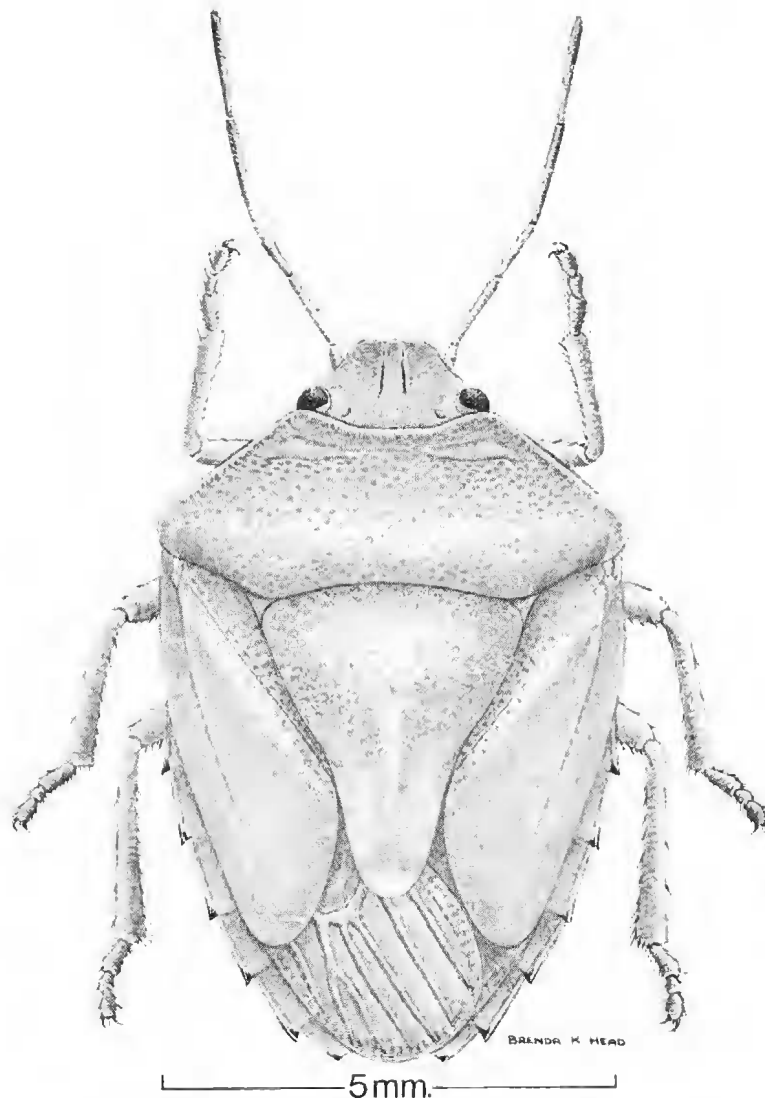


Fig. 45. Dorsal aspect of *Cuspicona privata* Walker.

Ocirrhoe privata Distant, 1900a, p. 422.

Cuspicona zeloma Kirkaldy, 1909, p. 143 (new name for *viride* Montrouzier).

Description:

General appearance: Ground colour bright green in life but museum specimens frequently yellowish. Punctuation fairly fine and even over dorsal surface, on dorsum of head denser and appearing rugulose. Lateral angles of pronotum broadly rounded.

Head: Concolorous, densely punctate. Eyes and ocelli concolorous or blackish.

Pronotum: Concolorous though lateral angles sometimes slightly infuscated; latter broadly rounded. Anterior margin concavely excavate behind collum changing rather gradually to obliquely excavate behind eyes. Anterolateral margins nearly straight. Posterolateral margin concavely elongate, posterior margin only slightly concave. Punctations fine though not very dense, calli impunctate.

Scutellum: Concolorous; rather long; faintly raised basally and nearly flat in apical two thirds. Lateral margins with at base a concolorous fovea, slightly convex in basal half, then straight and gently converging then converging more strongly to apex. A trace of a medial impunctate line on disc.

Hemelytra: Coriaceous parts concolorous, finely but not so densely punctate, narrowly glabrous just interior to medial fracture. Narrower than abdomen in apical three quarters; exterior margin of corium faintly concave basally then broadly convex to apex; apical angle strongly convex, posterior margin convex. Clavus reaching to about middle of scutellum, elongate triangular. Membrane hyaline with veins same colour.

Abdomen: Concolorous; impunctate.

Laterotergites: Concolorous; sometimes impunctate sometimes with sparse punctations; apical angles with a small black tipped spine, those on seventh segment hardly longer than rest.

Underside: Mainly concolorous or tending somewhat lighter than upperside with antennae and apical segment of rostrum (except black apex) brown. Tarsal claws black in apical halves. Bucculae low and sinuate, reaching about base of head, anteriorly produced into a small angulate lobe. Rostral segment I robust, reaching to base of bucculae, II nearly straight and just surpassing fore coxae, III reaching nearly to second coxae, IV to about middle of hind coxae. Ratio of antennal segments I-V 8:17:14:23:26. Propleuron coarsely punctate except

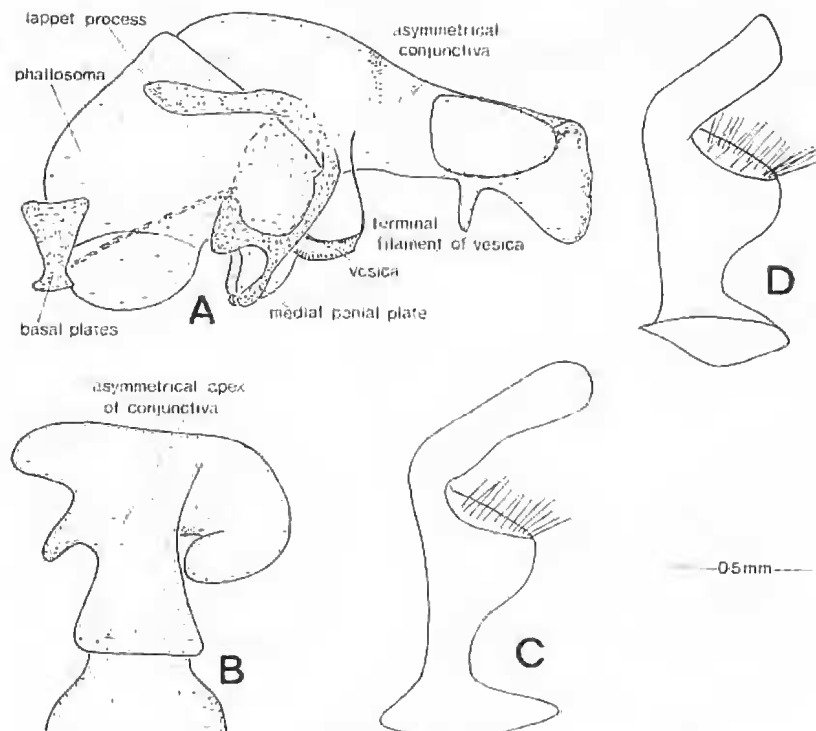


Fig. 46. *Cuspicona privata* Walker. A, right hand side view of aedeagus. B, dorsal aspect of apex (conjunctiva) of aedeagus. C, clasper (New Hebrides examples). D, clasper (Australian examples).

broadly along lateral margin and on proepisternum and proepimeron. Mesopleuron punctate only laterally in an anterior triangular area reaching from, and including, mesepisternum and with apex not reaching to exterior margin. Metasternum coarsely punctate only posteriorly. Metasternal-mesosternal keel reaching over prosternum but not to apex of latter, prosternum deeply sulcate under the keel, keel more elevated anteriorly than posteriorly. Femora normal, all tibiae rather flattened exteriorly in their apical quarter, first two pairs more obviously so than posterior pair; tarsi normal.

Abdomen only gently V-shaped in posterior view, coarsely punctate laterally, glabrous along midline and lateral margins. Apex of male abdomen Fig. 48 A, apical margin of pygophore

rather angulately concave, above posterior margin a low forwardly inclined septum. Clasper Fig. 46 C-D, rather F-shaped, the upper ramus much longer in New Hebrides specimens (Fig. 46 C) than in Australian specimens (Fig. 46 D). Aedeagus Fig. 46 A-B, with basal plates rather slender though large, phallosoma only slightly sclerotized. Conjunctiva produced anteriorly into an asymmetrical lobe (shown clearly in dorsal view Fig. 46 B), produced dextrally into two short lobes and sinistrally into a larger reflexed lobe; "lappet" processes rather long and slender; a robust vesica with a terminal filament opens in front of the medial penial plates which lie laterally on a ventral membranous swelling. Apex of female abdomen Fig. 48 B, hind margin of first gonocoxae oblique and slightly concave, so that there is only a short obtuse interior lobe.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	27	32	1.6	5.1	30-34
Head width	28	37	1.2	3.7	34-41
Antennal segment I	41	8	0.7	8.2	7-10
Antennal segment II	49	17	1.6	9.7	14-21
Antennal segment III	49	14	1.9	13.8	11-20
Antennal segment IV	33	23	1.8	7.8	20-27
Antennal segment V	23	26	1.7	6.7	23-29
Pronotum width	28	96	6.7	7.0	85-119
Pronotum length	28	34	2.2	6.6	28-39
Total length	28	159	12.0	7.6	138-176

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	32	32	1.8	5.4	28-35
Head width	32	38	1.6	4.2	35-41
Antennal segment I	54	8	0.8	9.2	6-9
Antennal segment II	57	17	1.5	9.0	13-20
Antennal segment III	56	14	1.8	13.4	11-22
Antennal segment IV	50	23	2.4	10.8	18-29
Antennal segment V	38	26	2.1	7.9	20-30
Pronotum width	32	99	5.4	5.5	83-110
Pronotum length	32	35	2.6	7.5	27-41
Total length	32	166	12.4	7.5	148-190

Total length: 7.2-9.9 mm

Remarks: This is one of the most widely distributed species of the genus in this area, ranging from the New Hebrides through the Loyalty Islands and New Caledonia to Australia and in Australia from Queensland to Victoria. The only records on plants are from ferns and blackberries.

The aedeagus is singular in the genus in that the conjunctiva apically is produced laterally but asymmetrically with two lobes, one the right hand side (as seen from the rear and looking forward) bifid and one larger entire reflexed lobe on the left hand side.

As the claspers of New Hebrides examples have the upper ramus much longer than in Australian examples a case could be made for a subspecific difference here. However, as we do not yet know the shape of the claspers in Loyalty Island or New Caledonian examples it would be premature to create subspecies at this time.

Location of types:

Type of *Pentatoma viride* Montrouzier, "Woodlark I.", not located; holotype ♀ of *Cuspicona privata* Walker, "Ancityum, New Hebrides", in BM; holotype of *Cuspicona laminata* Stål, "New Caledonia", in Stockholm.

Specimens examined: New Hebrides the type of *privata* Walker and 1 ♀, Aneityum, Nov. 1930, L. E. Cheesman, BM 1931-127; 1 ♀, Red Crest, 365 m., 4.8 km N.E. of Anelcauhat, Aneityum, May-June 1955, L. E. Cheesman, BM 1955-217; 1 ♀, Tanna, Oct. 1930, L. E. Cheesman BM 1931-30; 2 ♂, Erromanga, Aug. 1930, L. E. Cheesman, BM 1930-496; 1 ♂, north east Malekula, July 1929, L. E. Cheesman, BM 1929-514; 1 ♀, by beating ferns in vicinity of Anelcauhat, Aneityum, 22.VII.1971, G. F. Gross on Royal Society Percy Sladen Expedition SAM. Loyalty Islands 1 ♂, La Roche, Maré, 30.XI.1911, Distant coll. 1911-383 BM. Queensland 1 ♀, Pimpama, 17.III.1962, I. J. McKenzie, 1 ♂ Mt. Glorious, 25.IV.1930, D.D.A.; 1 ♂ Lamington National Park, 28.V.1959, F. A. Perkins; 1 ♂, Bald Mountain area, via Emu Vale, 900-1 200 m (3 000-4 000ft.), 26-30.I.1973, G. Monteith; UQ; 1 ♂, 2 ♀, Mt. Tambourine, 19 & 22.XII.1925, A. Musgrave & G. P. Whitley AM K 54695; 1 ♂, Fairy Bower, Rockhampton, 15.I.1962, I.F.B. Common; 1 ♀, Eidsvold ANIC; 1 ♀, Cairns, A. M. Lea; 1 ♂, Kuranda, F. P. Dodd; 1 ♀, Lake Barrine, Atherton Tableland, 700 m., 12.IV.1932, P. Darlington on Harvard Expedition; 1 ♀, Lankelly Creek, McIlwraith Range, Cape York Peninsula, 7.VI.1932, P. Darlington on Harvard Expedition; 1 ♀, Bundaberg, A. M. Lea; 1 ♀, National Park, McPherson Range, (910-1 220 m), 12.III.1932, P. Darlington on Harvard Expedition; 1 ♂, 3 ♀, Mt. Tambourine, A. M. Lea SAM; 1 ♂, Bundaberg BM 1942-95; 1 ♂, 2 ♀, Tambourine Mountains, 1-9 & 18-25.V.1935, R. E. Turner BM 1935-240; 1 ♀, National Park, McPherson Range, (910-1 220 m), 10.III.1932, P. Darlington on Harvard Expedition; 1 ♀, Lankelly Creek, McIlwraith Range, Cape York Peninsula, 7.VI.1932, P. Darlington on Harvard Expedition AMNH; 1 ♂, Tambourine Mountain, 28.X.1912, H. Hacker, KU; 1 ♂, Mt. Glorious, in rain forest, 13-16.II.1961, L. & M. Gressitt; 1 ♂, 1 ♀, Lamington National Park, 900-1 000 m., 16-18.II.1964, J. Sedlacek; 1 ♂, 1 ♀, Babinda, from scrub, 1920, J. F. Illingworth BISHOP. New South Wales 1 ♂, Dorrigo National Park via Dorrigo, 21.I.1966, T. Weir UQ; 1 ♀, Tooloom, Jan. 1926, H. Hacker QM; 1 ♂, Dorrigo, W. Heron; 2 ♂, Ulong East, Dorrigo, W. Heron, K 43657; 1 ♂, 1 ♀, Comboyne, 10.XI.1932, K. C. McKeown, K 66123-4; 1 ♂, Wollongong, Dobbins Bush, on blackberry, 12.II.1949 and 1 ♀, Wollongong, on blackberry inflorescence, 13.III.1949, both C. E. Chadwick; 1 ♀, Sydney, Oct. 1931, Dr. K. K. Spence AM; 1 ♀, Bawley Points of Ulladulla, 2.II.1961, D. F. Waterhouse; 1 ♀,

8 km (5 miles) south of Bega, 28.XII.1964, K. R. Norris ANIC; 1 ♀, Upper Williams Road, Oct. 1926, Lea & Wilson; 1 ♂, Baw Baw near Armitage, Mar. 1914 NM; 1 ♂, 1 ♀, Dorrigo; 1 ♂, Sydney, Lea SAM; 1 ♂, Fairfield, 27.II.1960, F. L. Edwards BM 1960-370; 1 ♀, The Dorrigo, 1 000 m, W. Heron BM; 1 ♂, 1 ♀ Killara, 16.III.1945, N.E. Kent BM 1950-317; 1 ♀, unlocalised, RM; Australian Capital Territory 1 ♀, Black Mountain, 4.III.1964, H. Davies; 2 ♀, O'Connor, 13.XII.1967, I.F.B. Common ANIC; Victoria 2 ♀, Langwarrin, 8.XII.1923; 1 ♂, Jarrah Valley, Jan. 1961, K. Healey; 1 ♂, Walhalla, Apr. 1930, F. E. Wilson; 1 ♂, Burwood, 16.IX.1959, K. Matchett; 1 ♂, 1 ♀, Ferntree Gully, Jan. 1916, donated F. P. Spry; 1 ♂, Melbourne, May 1929, F. D. Selby; 2 ♂, 12 km. south east of Merrijig, Howqua River, 30.XI.1971, A. Neboiss; 1 ♀, Millgrove, 9.II.1929, F. E. Wilson NM; 1 ♂, Launching Place, 10.I.1905, ex E. P. Van Duzee Collection CA.

Cuspicona norfolcensis sp. nov.

Figs. 47, 48 C

Description:

General appearance: Yellowish, but probably bright green in life. Punctuation not even over dorsal surface, on head denser and appearing rugulose. Lateral angles of pronotum obliquely truncate.

Head: Concolorous, densely punctate. Eyes purple, ocelli red.

Pronotum: Concolorous. Anterior margin rather angulately excavate behind collum and oblique behind eyes. Anterolateral margins nearly straight, lateral angles obliquely truncate; posterolateral margin concavely excavate; posterior margin slightly concave. Punctations fine and fairly dense, calli impunctate.

Scutellum: Concolorous, rather long; faintly raised basally and nearly flat in apical two thirds. Lateral margin with at base a concolorous fovea, slightly convex in basal half, then straight then converging to relatively narrow rounded to lanceolate apex. Punctate as for pronotum.

Hemelytra: Coriaceous parts concolorous, punctations coarser and less dense than on pronotum and scutellum, narrowly glabrous just interior to medial fracture. Only slightly narrower than abdomen in apical half; exterior margin of corium fairly concave basally then broadly convex to apex; apical angle convex and posterior margin convex. Clavus reaching about middle of scutellum, elongate triangular. Membrane and its veins hyaline.

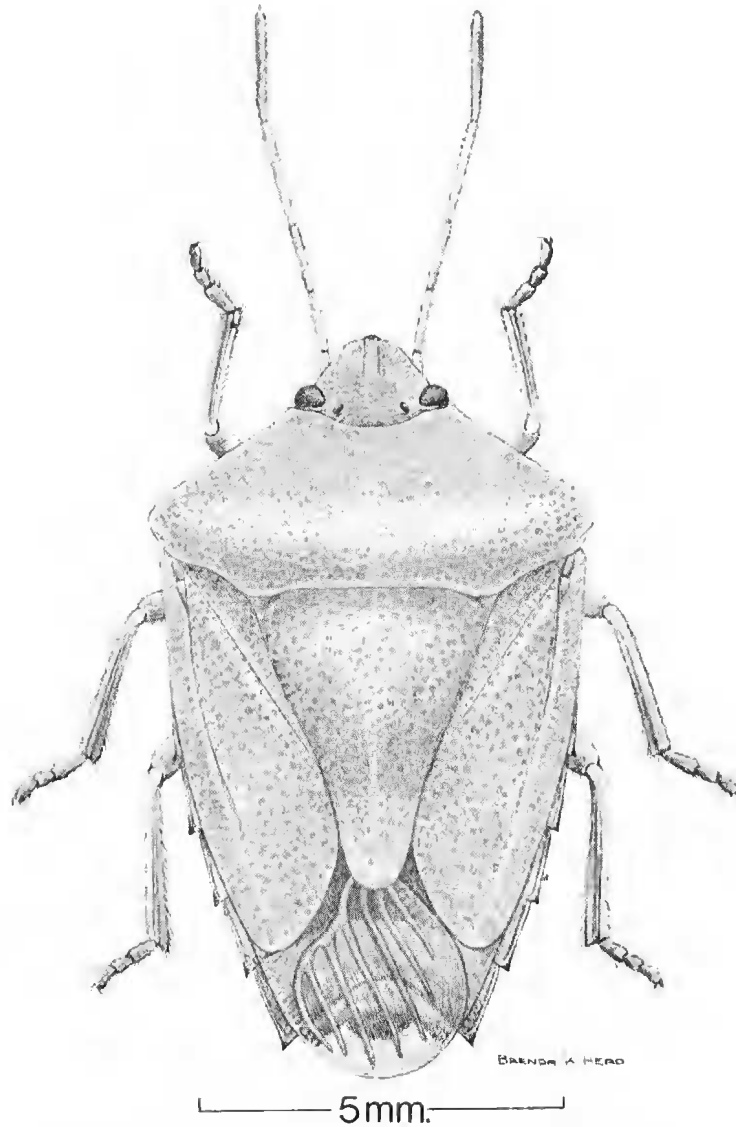


Fig. 47. Dorsal aspect of *Cuspicona norfolcensis* sp. nov.

Abdomen: Not visible on single example.

Laterotergites: Interiorly concolorous but exteriorly narrowly infuscated on laterotergites VI and VII; apical angles with a small black-tipped spine, the spines on VI and VII larger than rest.

Underside: Concolorous but apices of rostrum, tarsal claws, abdomen and pygophore (wholly) infuscated. Bucculae low and sinuate, reaching base of head, anteriorly produced into an angulate lobe. Rostral segment I robust, reaching to base of bucculae, II nearly straight and just surpassing fore coxae, III reaching between mid and hind coxae, IV to about middle of third abdominal segment. Ratio of antennal segments I-V 11:20:20:28:30. Propleuron coarsely punctate except broadly laterally and on proepisternum and proepimeron. Mesopleuron

apparently impunctate, metapleuron also impunctate. Metasternal-mesosternal keel reaching over prosternum to apex of latter, rather strongly elevated anteriorly and lower posteriorly. Legs normal, tibiae not flattened.

Abdomen strongly V-shaped in posterior view, a few scattered punctations laterally. Apex of male abdomen Fig. 48 C, seventh segment apically in the middle and its posterior spines and pygophore infuscated. Apical margin of pygophore sinuate.

Dimensions: Head length 30, head width 42, antennal segment I 11, antennal segment II 20, antennal segment III 20, antennal segment IV 28, antennal segment V 30, pronotum length 41, pronotum width 119, total length 200.

Total length: 10.4 mm.

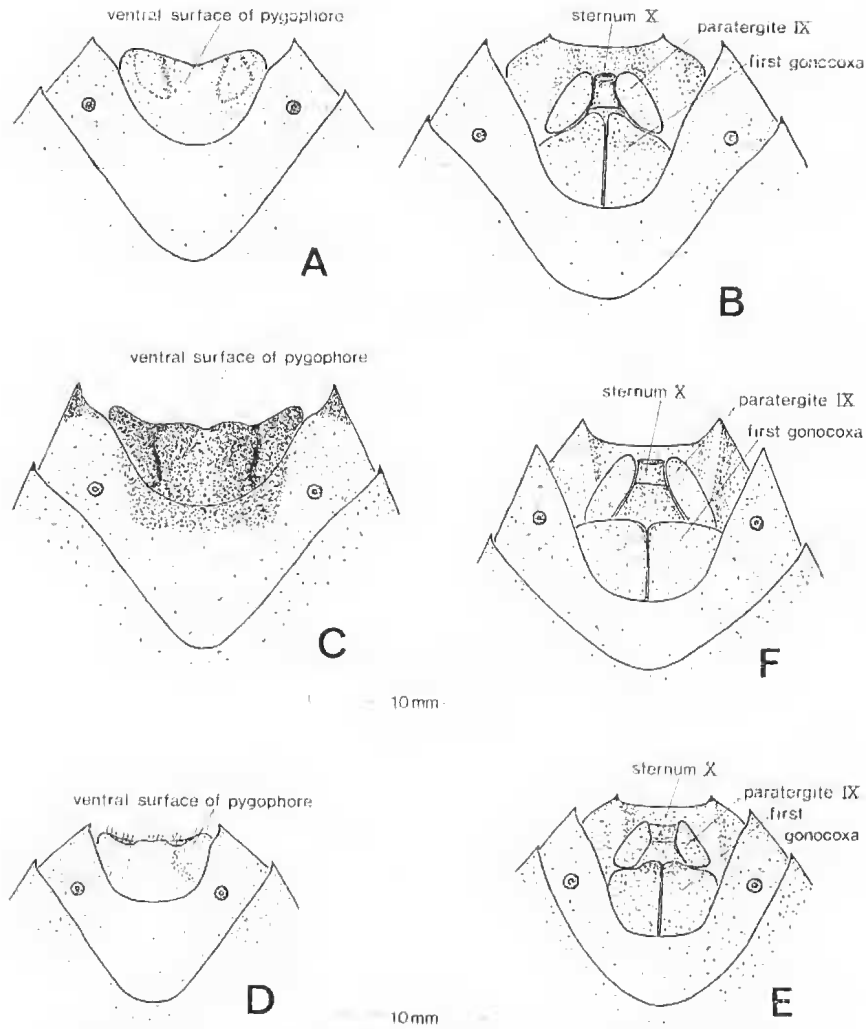


Fig. 48. *Cuspicona privata* Walker, *Cuspicona norfolcensis* sp. nov., *Cuspicona simplex* Walker, *Parocirrhoe woodwardi* gen. sp. nov. A-B. *Cuspicona privata*. A. ventral aspect of apex of male abdomen. B. ventral aspect of female abdomen. C. *Cuspicona norfolcensis*—ventral aspect of male abdomen. D-E. *Cuspicona simplex*. D. ventral aspect of male abdomen. E. ventral aspect of female abdomen. F. *Parocirrhoe woodwardi*—ventral aspect of female abdomen.

Remarks: This species is fairly similar to *privata*, *simplex* and *proxima* in general appearance but may be distinguished, at least in males, by the darkened abdominal apex beneath.

Location of type:

Holotype ♂, Norfolk Island, A. M. Lea, SAM 1 20, 662.

Specimens examined: The holotype only.

***Cuspicona simplex* Walker, 1867**

Figs. 1 B, 48 D-E, 49, 50 A-D, 51

Cuspicona simplex Walker, 1867, p. 388. Froggatt, 1901, p. 5, fig. 8; 1907, p. 329, pl. 31. Sloan, 1941, p. 277-294. Anon., 1942 p. 498. Spiller & Turbott, 1944, p. 79. Woodward, 1953, p. 314, 320; 1954, p. 215, 217. Eyles, 1960, p. 1004. Ramsay 1963, p. 5.

Cuspicona virescens Tryon, (*non* Westwood & Dallas), 1889, p. 189.

Description:

General appearance: Ground colour bright green in life but museum specimens frequently yellowish. Punctation fairly fine and even over dorsal surface, on dorsum of head denser and appearing rugulose. Lateral angles of pronotum acute.

Head: Concolorous, densely punctate. Eyes and ocelli concolorous or blackish purple.

Pronotum: Concolorous though lateral angles partly blackish or pinkish at extreme apex. Apical angles produced as a short rectangular spine about one-third length of posterolateral margins. Anterior margin trapeziformly excavate behind collum and obliquely truncate behind eyes.

Anterolateral margin straight or only very faintly concave, obtuse. Posterolateral margin strongly and rather rectangularly concave, posterior margin only faintly concave. Punctuation fine and dense, calli impunctate.

Scutellum: Concolorous; flat in apical two thirds, faintly raised in basal third. Lateral margins with at base a concolorous fovea, slightly convex in basal half, then straight but converging to near apex, latter broadly rounded. A trace of a medial impunctate line on disc.

Hemelytra: Coriaceous parts concolorous; finely and fairly densely punctate except just inward of medial fracture in its apical half, then glabrous. Exterior margin of corium slightly concave basally then broadly convex to apex; apical angle strongly convex; posterior margin convex. Clavus short but elongate triangular. Membrane hyaline with veins same colour.

Abdomen: Concolorous; impunctate.

Laterotergites: Concolorous; some coarse punctations exteriorly; apical angles with a small black tipped spine, those on seventh segment not longer than rest.

Underside: Concolorous except: antennae brown; underside of rostrum and apex of terminal segment, apical halves of tarsal claws, and apical spines on sides of abdominal ventrites black. Bucculae low and sinuate, reaching almost to base of head, anteriorly lobulately produced. Rostral segment I robust, reaching almost to base of bucculae, II arched and reaching nearly to middle of mesosternum, III reaching to between mid and hind coxae, IV reaching about apex of abdominal ventrite III. Ratio of antennal segments I-V approximately 8 : 19 : 18 : 26 : 29. Propleuron coarsely punctate except broadly along lateral margin and on proepisternum and proepimeron. Mesosternum coarsely punctate but with several callous patches, an especially large one ventrally. Mctasternum coarsely

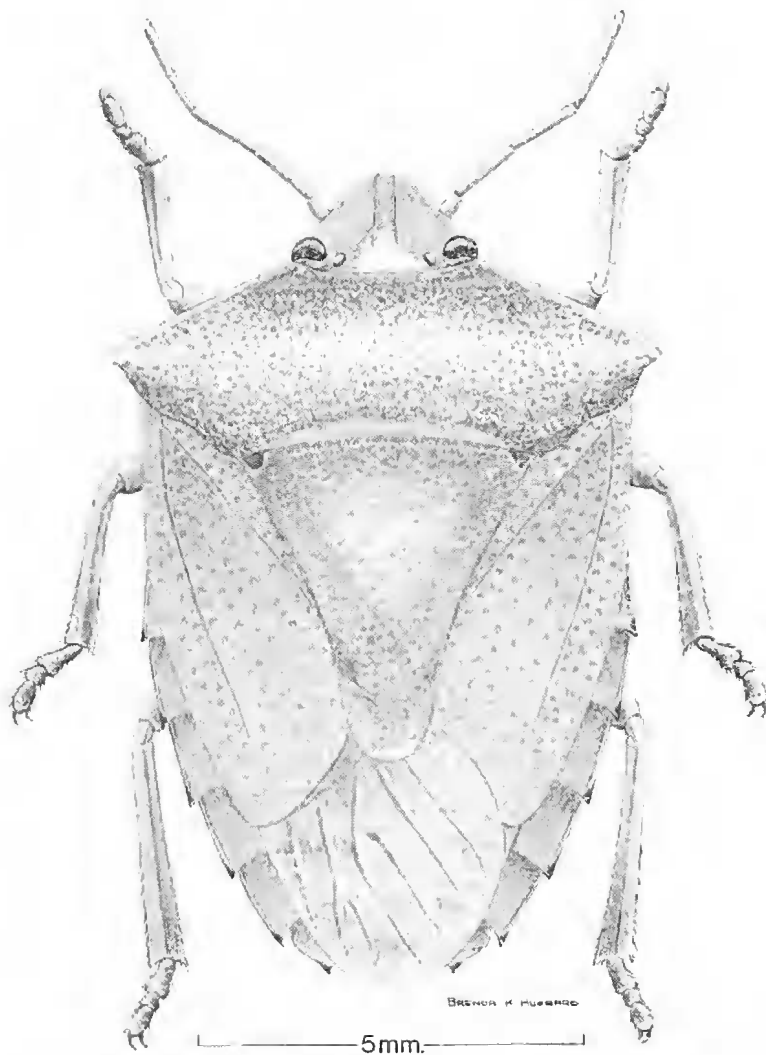


Fig. 49. Dorsal aspect of *Cuspicona simplex* Walker.

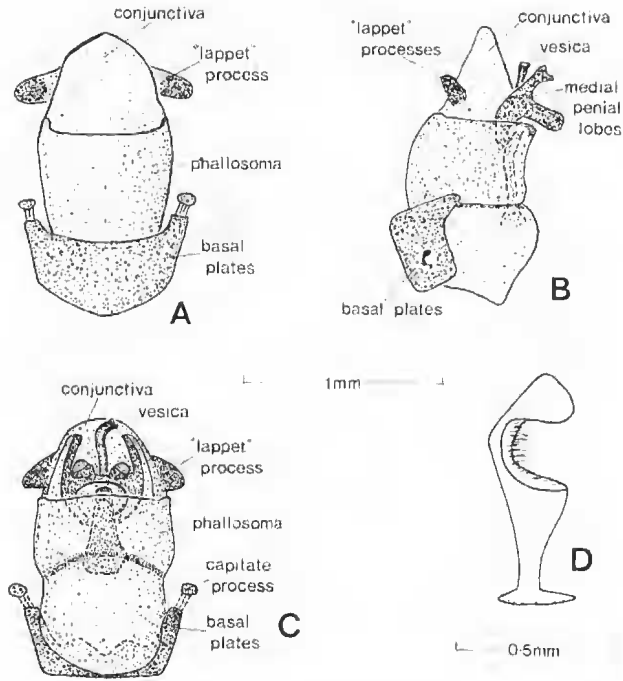


Fig. 50. *Cuspicona simplex* Walker. A. dorsal aspect of aedeagus. B. righthand side view of aedeagus. C. ventral aspect of aedeagus. D. clasper.

punctate except on evaporative area. Mesosternal keel reaching over prosternum but not to apex of latter, prosternum deeply sulcate under the keel, the keel more elevated in anterior half than posterior half. Legs normal, tibiae cylindrical.

Abdomen strongly V-shaped in posterior view, medially rather broadly raised along midline and glabrous, glabrous also along lateral margins between, these and midline coarsely punctate. Apex of male abdomen Fig. 48 D, apical margin of pygophore rather sinuate, medially the posterior margin ventrally more depressed than the remainder, above posterior margin a low septum.

Clasper Fig. 50 D, strongly F-shaped. Aedeagus Fig. 50 A-C with basal plates rather large, phallosoma only very lightly sclerotized. Conjunctiva rather rounded in dorsal and ventral view, triangular in lateral view, not divided into appendages except for a pair of more strongly sclerotized "lappet processes" dorso-laterally; medial penial plates ventrally directed and in the shape of an inverted Y when viewed from the side, their dorsal arms apparently connected (Fig. 50 C); there is a short vesica opening just in front of the medial penial plates. Apex of female abdomen Fig. 48 E, hind margin of first gonocoxae produced only into a short lobe which is not rectangular.

Dimensions—

MALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	49	34	1.8	5.4	29-38
Head width	50	40	1.5	3.8	36-43
Antennal segment I	76	9	1.0	10.8	6-11
Antennal segment II	85	19	1.2	6.0	17-22
Antennal segment III	86	18	1.6	8.9	14-21
Antennal segment IV	78	26	1.6	6.3	21-29
Antennal segment V	60	30	1.4	4.9	25-31
Pronotum width	49	117	6.5	5.5	105-135
Pronotum length	50	38	3.5	9.1	32-47
Total length	50	182	9.3	5.1	160-203

Dimensions—

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	49	34	2.1	6.1	30-40
Head width	50	41	1.6	4.0	37-45
Antennal segment I	79	9	0.7	8.3	7-10
Antennal segment II	86	20	1.2	6.0	16-25
Antennal segment III	83	18	1.7	9.1	15-22
Antennal segment IV	69	26	1.7	6.4	22-30
Antennal segment V	59	29	1.6	5.3	23-32
Pronotum width	50	125	8.7	6.9	105-139
Pronotum length	50	41	3.6	8.7	34-48
Total length	50	196	12.2	6.3	170-225

Total length: 8.3-11.7 mm

Remarks: This species is particularly common near the coast in eastern Australia though there are scattered records from Victoria, Tasmania, South Australia and Western Australia (Fig. 51). It occurs in New Zealand (Spiller and Turbott, 1944; Woodward 1953 and 1954; Eyles, 1960; Ramsay, 1963) and the Three Kings Islands (Woodward, 1954) where it is believed to be introduced from Australia, and occurs also on Lord Howe Island (material in ANIC).

In common with several other species in this section of the genus it is associated frequently with solanaceous plants, particularly the genus *Solanum*. In Australia it has been reported from *Solanum nigrum* L. and potatoes (Tryon 1889, Froggatt 1901) and from tomatoes (Sloan, 1941). Other records noted from the specimens examined are potatoes (Gordon N.S.W.), *Solanum hispidum* Pers. (Mitcham S.A.), wild tobacco (Mt. Tambourine, Queensland), flower



Fig. 51. Distribution in Australia of *Cuspicona simplex* Walker.

garden near rain forest (Eagle Mts., Queensland) and in a sweepnet (Mcmai, N.S.W.). On Lord Howe Island it was taken from *Solanum mauritianum* Scop. and in New Zealand has been recorded from tomatoes, *Solanum auriculatum* Ait. and *Solanum sodomaeum* L. (Spiller and Turbott, 1944), and also on Mangels (Eyles, 1960). On the Three Kings Islands it was captured on *Solanum nigrum* L. and *Solanum aviculare* Forst.

Location of types:

Holotype ♂ of *simplex* Walker, "South Australia, presented R. Bakewell", in BM.

Specimens examined: New Zealand 2 ♀, Auckland, 30.IX.1939, O. Spiller ANIC. Lord Howe Island 1 ♂, 29.XI.1955, S. J. Paramanov and Z. Liepa; 3 ♂, 2 ♀, 5.X.1959, T. G. Campbell; 1 ♀, 1?, 15.X.1964, on *Solanum mauritianum* Scop., R. G. Lukins ANIC. Australia

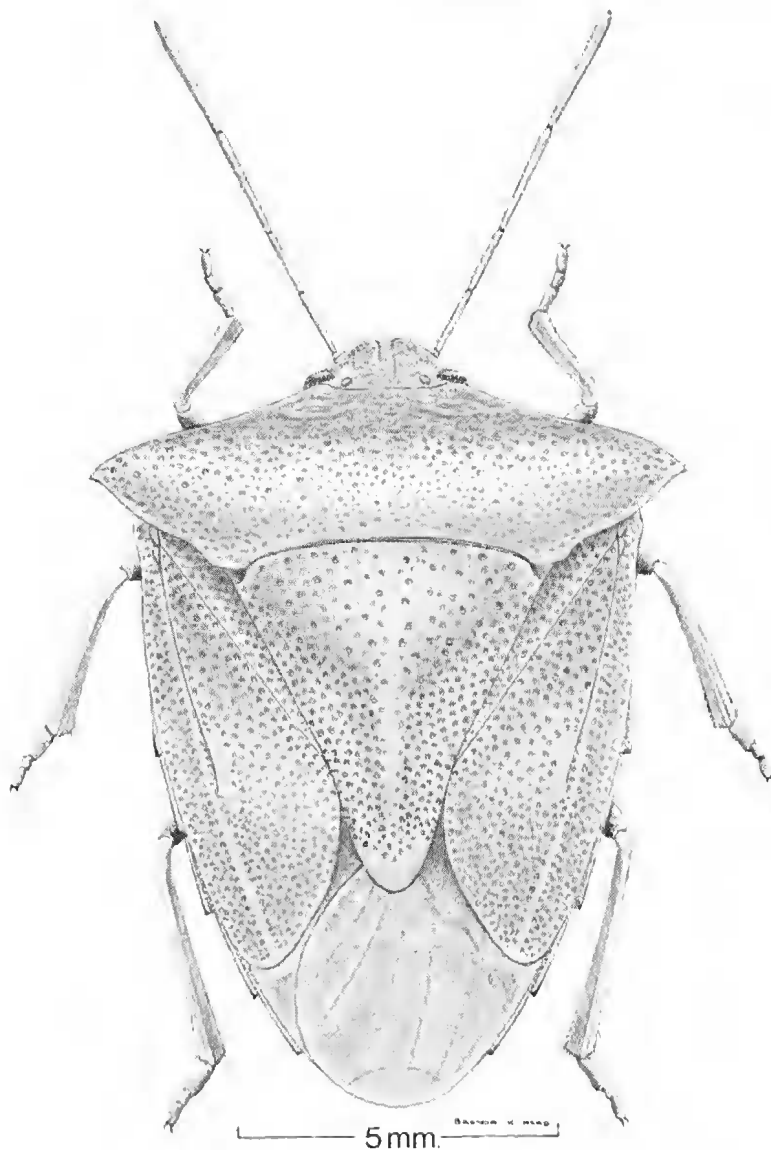


Fig. 52. Dorsal aspect of *Cuspicona proxima* Walker.

and Tasmania, the type and the numbers in parentheses from the following collections: QM (15), UQ (31), AM (32), ANIC (41), NM (10), SAM (42), BM (25), Stockholm (2), AMNH (6), KU (3), Ashock (1), CA (1) and Bishop (16). As this is a quite common species individual Australian and Tasmanian records have not been listed in detail but are plotted on Fig. 51.

***Cuspicona proxima* Walker, 1867**

Figs. 52, 53 A-C

Cuspicona proxima Walker, 1867, p. 382.
Black, 1968, p. 563.

Description:

General appearance: Ground colour green in life but yellowish in museum specimens with produced lateral angles of pronotum occasionally

fairly pinkish at extreme apices. Punctuation relatively coarse and even over dorsal surface, on dorsum of head denser and appearing rugulose.

Head: Concolorous, densely punctate; about as wide as long. Eyes and ocelli purplish or concolorous.

Pronotum: Concolorous though tip of lateral angles faintly pink, reddish or yellowish. Latter produced as a very short, conical, reflexed, thick, blunt spine about $\frac{3}{5}$ length of postero-lateral margins; its apical portion, calli and anterolateral margins impunctate. Anterior margin trapeziformly excavate behind collum and obliquely truncate behind eyes. Antero-lateral margin before produced lateral angle faintly concave, obtuse. Posterolateral margin concave, posterior margin shallowly concave.

Scutellum: Concolorous, flat in apical half but faintly raised in basal half, in apical half a faint trace of a medial longitudinal line; lateral margins basally feebly convex, at apices of frena broadly angulate then straight but gradually converging to near apex, latter broadly angulate. Frena reaching about half length of lateral margins.

Hemelytra: Coriaceous parts concolorous. Exterior margin of corium broadly concave in basal quarter and broadly convex in apical three-

quarters; apical angle strongly convex, posterior margin convex. Clavus short but elongate triangular. Membrane hyaline with veins same colour.

Abdomen: Concolorous; finely punctate.

Laterotergites: Concolorous; some coarse punctations exteriorly; apical lateral angles with a small black tipped spine, those on seventh segment not longer than rest.

Underside: Concolorous except for reddish, sometimes blackish, apex of lateral spine on thorax and some small black spots on embolium. Bucculae low and sinuate, reaching almost to base of head, anteriorly lobulately produced. Rostral segment I robust, reaching base of bucculae; II arched and reaching about middle of mesosternum; III reaching between mid and hind coxae; IV reaching almost to apex of third abdominal ventrite, apically black. Antennae rather browner than rest of body, first segment not reaching apex of head, ratio of segments 10:21:22:34:38.

Propleuron coarsely punctate behind level of coxae except on obtuse margin and underside of lateral angle, metapleuron sparsely punctate in extreme posterior region. Mesosternal keel reaching over prosternum to apex of latter, more elevated in anterior half. Legs normal, tibiae cylindrical.

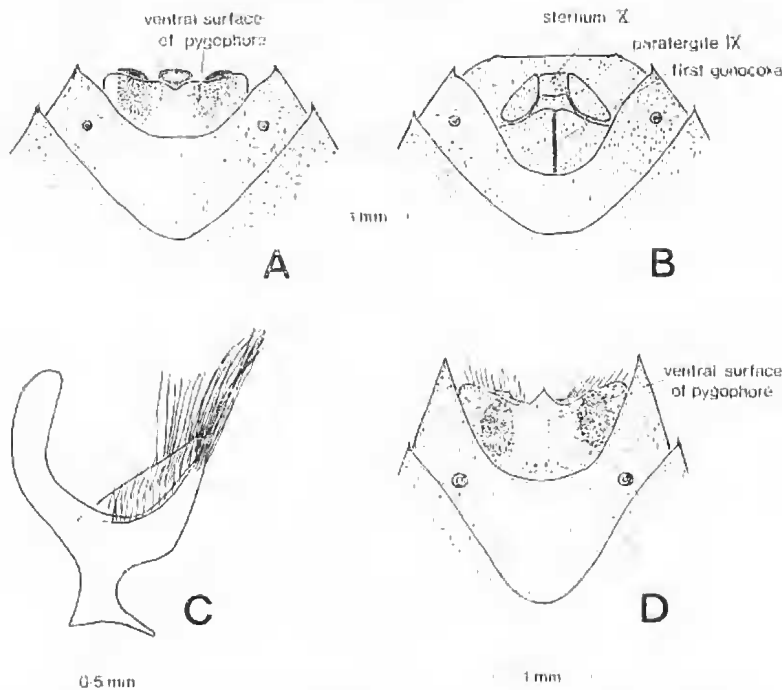


Fig. 53. *Cuspicona proxima* Walker, *Parocirrhoe woodwardi* gen. et sp. nov. A-C. *Cuspicona proxima*. A. ventral aspect of male abdomen. B. ventral aspect of female abdomen. C. clasper. D. *Parocirrhoe woodwardi*—ventral aspect of male abdomen.

Abdomen strongly V-shaped in posterior view, medially rather raised along ventral midline, impunctate. Apex of male abdomen Fig 53 A, apical margin of pygophore conspicuously notched medially with two very shallow black lobes laterally about midway between notch and lateral margin, medially behind notch above a

narrow obliquely directed septum, on the inner lateral wall on each side a small black tipped tooth. Clasper of male, Fig. 53 C, rather Y-shaped with one lobe strongly pilose. Apex of female abdomen, Fig. 53 B, hind margin of first gonocoxae sinuately oblique and not produced medially into a rather angular lobe.

Dimensions—

Parameter	MALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	15	39	2.1	5.3	35-43
Head width	15	45	1.5	3.4	42-47
Antennal segment I	26	10	0.4	3.9	9-11
Antennal segment II	27	21	1.3	6.3	18-24
Antennal segment III	27	23	2.0	8.9	19-25
Antennal segment IV	24	34	2.1	6.2	30-38
Antennal segment V	17	37	2.7	7.4	31-40
Pronotum width	15	143	6.3	4.4	130-153
Pronotum length	15	40	5.1	12.7	34-52
Total length	15	201	13.1	6.5	170-210

Parameter	FEMALES				
	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	19	39	2.4	6.2	35-43
Head width	19	45	1.7	3.8	42-50
Antennal segment I	26	10	0.3	2.8	9-11
Antennal segment II	31	21	0.9	4.5	20-23
Antennal segment III	31	21	1.6	7.6	19-25
Antennal segment IV	25	33	2.0	6.1	28-36
Antennal segment V	14	39	1.1	2.8	37-40
Pronotum width	19	146	12.3	8.4	129-173
Pronotum length	19	39	5.2	13.5	32-50
Total length	19	200	13.2	6.1	170-230

Total length: 8.8-12.0 mm

Remarks: On exterior appearance this species would appear to be closest to *simplex*, though the lateral angles of the pronotum are more acutely produced. However, the clasper is significantly differently shaped in having a rather Y-shaped appearance with the lower lobe being strongly developed.

Examples of this species from New Guinea may have been misidentified as *ampla* Walker (originally described from Waigiu) and at other times as *laminata* Stål as, for example, in the Annual Report of the Papua and New Guinea Department of Agriculture, Stock and Fisheries for the financial year 1965-66 where the following reference occurs on page 118. "Heavy populations of the pentatomid *Cuspicona* sp? *laminata* occurred on tobacco at Popondetta." This record, and the records below, of the species being found frequently on members of the genus *Solanum* are significant as specimens of three other species in the group, *simplex*, *neocaledoniae* and *forticornis*, have also been recorded from *Solanum* species (see pp. 143-4, 150 and 153).

Cuspicona proxima was described from the Ké Islands. A specimen of each sex, the female bearing a green "Type" disc, are in the British Museum from this locality. The marking of the type seems to be an arbitrary curatorial decision according to Dr. W. R. Dolling (pers. com.). As this species is most likely to be confused with *C. ampla* (which is represented in the British Museum by the original female type and one specimen added subsequently to Walker's description) I have chosen the female from the Ké Islands as the lectotype of *C. proxima*, and the male as a paralectotype. This species has now been recorded from the Aru Islands and from New Britain and the Duke of York Islands in the Bismark Archipelago (Black, 1968). The species can now be recorded from Papua-New Guinea (from several species and genera of plants) and possibly also from Celebes.

Location of types:

Lectotype ♀ paralectotype ♂, "Ké Islands presented W. W. Saunders", in BM.

Specimens examined: Papua-New Guinea ♂, Port Moresby, Papua, 28.II.1962, K. R. Norris (ANIC); 2♂♂, 3♀♀, Komba, New Guinea, Reverend L. Wagner (SAM); 8♂♂, 6♀♀ Pati, Popondetta, Northern District of Papua, 10-17.I.1966, feeding on tobacco, S. Ido & B. Kearo (these specimens were taken during infestation mentioned in 1965-66 Department of Agriculture, Stock and Fisheries report cited above); ♂♀, Wau, New Guinea, 30.X.1956, on *Solanum verbascifolium* L. = *erianthum* D. Don. J. H. Ardley; sex?, no precise locality or date, New Guinea, J. L. Froggatt; ♀, Upper Sirimumu in Central District, Papua, 8.V.1966, T. Fenner; 1♂, 4♀♀, Papuan Highland on *Solanum mammosum* L., Stock and Rubber Experimental Station, Bisianumu, Central District, Papua, 1 (1 600 feet), on *Hevea brasiliensis* Muell. Arg. seedlings, 15.VI.1962, T. V. van Harren; ♂♀, Redshield Farm (32 miles) from Pt. Moresby, Central District, Papua, on *Crotalaria anagyroides* H.B.C., 15.X.1965, E. Kanjiri (Department of Agriculture, Stock and Fisheries, Pt. Moresby). New Britain, 2♀♀, Rabaul, from seedheads of *Solanum* sp., 22.V.1941, J. L. Froggatt; ♂♀, Mosa Plantation, West New Britain, 25.IV.1968, D. F. O'Sullivan, (Department of Agriculture, Stock and Fisheries, Pt. Moresby).

Two specimens collected by Forsten at Ton-dano in the Celebes in the RM collections over the label *ampla* Walker appear to be very close to, if not, *proxima* Walker. A note to this effect has been added by the author to the labels under each example.

Cuspicona ampla Walker, 1867

Cuspicona ampla Walker, 1867, p. 381. Distant, 1888, p. 480.

Remarks: The type of this species has been examined for me by Dr. W. R. Dolling of the British Museum and the species appears to be distinct from *proxima*. The species is definitely a *Cuspicona* and differs from the type of *proxima* in that the pronotal dorsal punctation is much sparser than that of *proxima* and that the rostrum reaches to the base of abdominal ventrite VII. A second specimen from New Guinea bearing the label "New Guinea Coll. Sayer" is clearly the specimen recorded by Distant and has the rostrum reaching the apex of the seventh abdominal ventrite.

As I have not seen this species in any of the material and have examined from the eastern half of New Guinea a detailed description is omitted. The species appears to be very close to *proxima* and also to some of the species in the Indonesian area.

Location of type:

Holotype ♀, "Wagiou, presented W. W. Saunders" in BM.

Cuspicona neocaledoniae sp. nov.

Figs. 54, 55 A-D

Description:

General appearance: Ground colour probably green in life but yellowish-brown in museum specimens with produced lateral angles of pronotum occasionally faintly pinkish at apices. Punctuation relatively coarse and even over dorsal surface save on dorsum of head, there denser and appearing rugulose.

Head: Concolorous, densely punctate; wider than long. Eyes and ocelli purplish or concolorous.

Pronotum: Concolorous though rarely tip of lateral angles faintly pink. Latter produced as a short, conical, slightly reflexed, blunt spine, about three-quarters length of posterolateral margins, its apical portion and calli impunctate. Anterior margin strongly and rather obtuse angledly excavate behind collum, obliquely truncate behind eyes. Anterolateral margin before produced lateral angle faintly concave, obtuse. Posterolateral margin concave, posterior margin shallowly concave.

Scutelum: Concolorous; rather flat but with a distinct low, narrow, longitudinal median raised line running from base to apex; laterally margins basally feebly concave, frena reaching about four-sevenths their length, at apices of frena broadly angulate, then straight and converging gradually to subacuminate apex.

Hemelytra: Coriaceous parts concolorous. Exterior margin of corium slightly concave in basal quarter, rather angulately convex in distal three-quarters; apical angle strongly convex; posterior margin convex. Clavus short and triangular. Membrane hyaline with veins same colour.

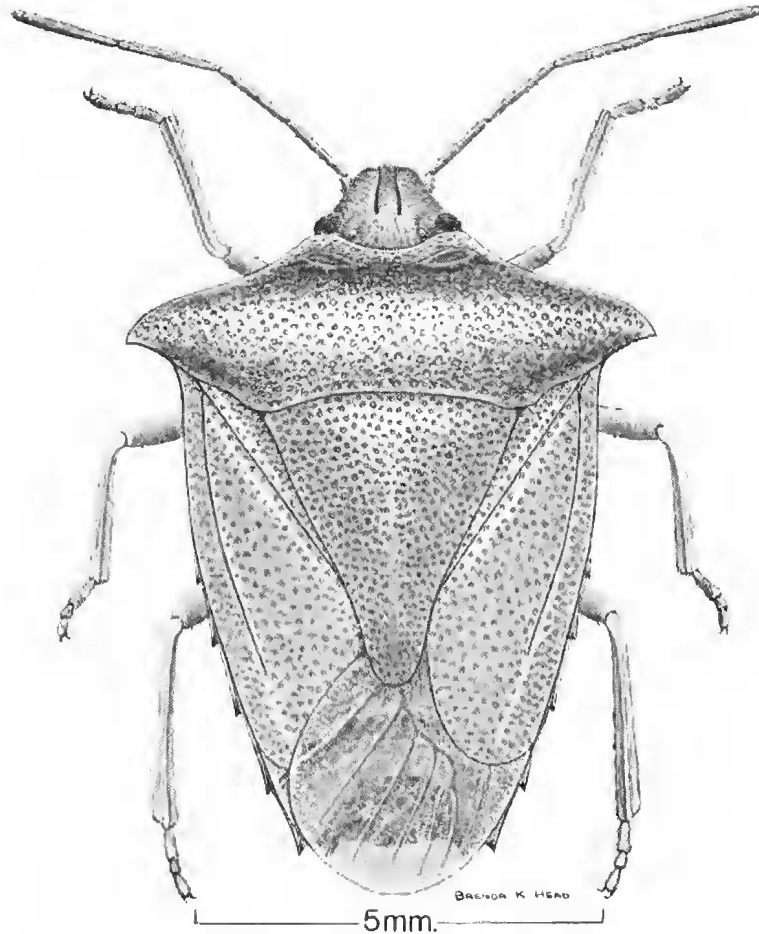


Fig. 54. Dorsal aspect of *Cuspicona neocaledoniae* sp. nov.

Abdomen: Concolorous laterally, darker medially.

Laterotergites: Concolorous; apical lateral angles with a small acute spine, those of seventh segment larger.

Underside: Concolorous. Bucculae low and sinuate, reaching almost to base of head, anteriorly more raised and rectangularly lobulate. First rostral segment robust, reaching to base of bucculae, second faintly arched and reaching about middle of mesoternum, third reaching between mid and hind coxae, fourth reaching almost to apex of third abdominal ventrite, apically tipped with black. Antennae concolorous, first segment not reaching apex of head, shortest, second a little longer than third, fourth about 25% longer than second, fifth a little longer than fourth.

Propleuron coarsely punctate except for obtuse lateral margins and underside of produced lateral angle. Metapleuron punctate only in

extreme posterior portion. Mesosternal keel reaching over prosternum to apex of latter, somewhat more elevated in anterior half. Legs normal, tibiae cylindrical.

Abdomen strongly V-shaped in posterior view, medially rather raised along ventral midline, finely punctate or rugulose laterally. Apex of male abdomen Fig. 55 A, apical margin of pygophore turned vertically upwards as a sort of septum but along ventral surface of the septum medially notched, ventral surface of pygophore swollen laterally and also basally in the middle. Clasper F-shaped, Fig. 55 D. Aedeagus of male Fig. 55 C, with phallosoma lightly sclerotized, conjunctiva dorsally near base with a pair of small "lappet" processes, towards apex dorsally produced upwards as a large medial lobe, apico-ventrally produced into a pair of tubular processes. Medial penial plates faintly in the form of a thick inverted Y, vesica placed a little in front of them. Apex of female abdomen Fig. 55 B.

Dimensions—

MALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	11	35	1.0	3.0	33-37
Head width	12	39	1.1	2.8	37-40
Antennal segment I	19	9	0.7	7.2	8-10
Antennal segment II	20	19	0.9	4.7	18-21
Antennal segment III	20	18	1.7	9.0	15-20
Antennal segment IV	17	25	0.9	3.4	25-28
Antennal segment V	8	28	1.4	5.0	26-30
Pronotum width	12	126	6.8	5.4	120-140
Pronotum length	12	34	2.0	6.0	30-37
Total length	12	172	7.3	4.3	161-180

FEMALES

Parameter	Number of Measurements	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	6	37	2.0	5.4	33-38
Head width	8	40	1.4	3.4	38-42
Antennal segment I	15	10	0.5	5.3	9-10
Antennal segment II	16	20	0.8	4.2	19-21
Antennal segment III	16	17	1.7	9.8	15-20
Antennal segment IV	12	26	1.2	4.5	24-28
Antennal segment V	5	28	1.6	5.8	27-30
Pronotum width	9	134	8.7	6.5	122-150
Pronotum length	8	35	2.8	8.2	32-41
Total length	8	185	9.4	5.1	170-200

Total length: 8.4-10.4 mm

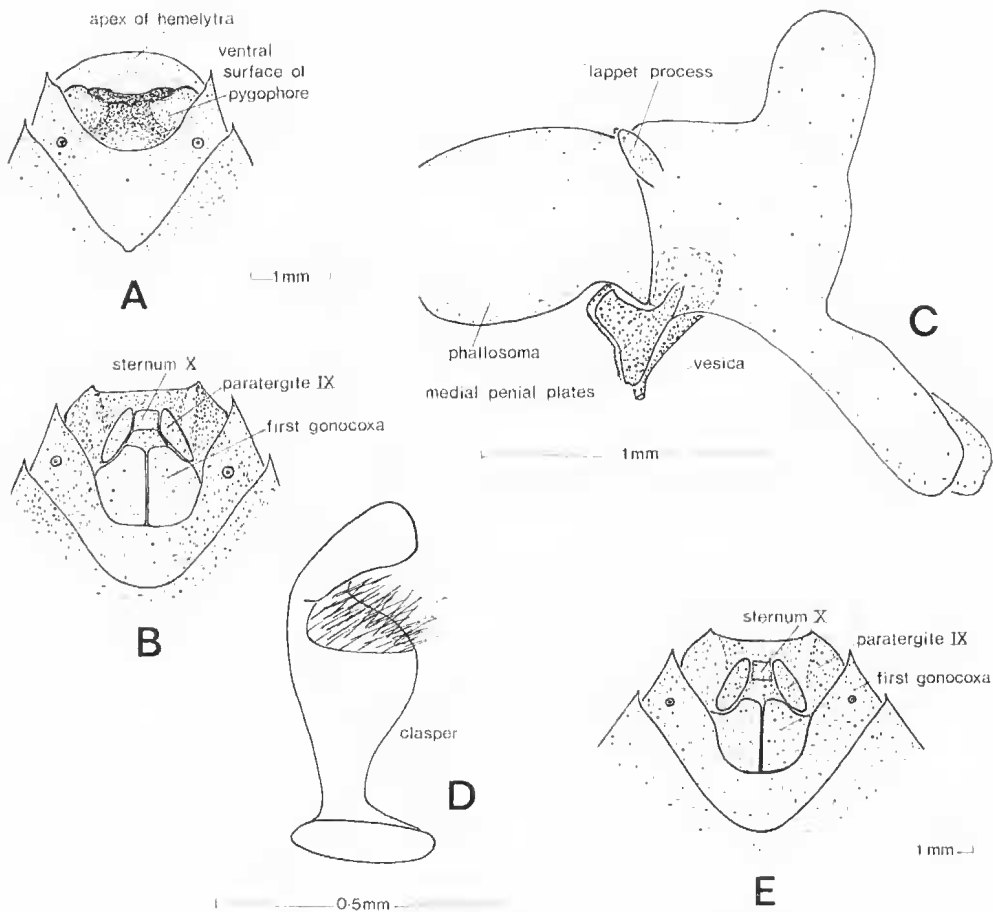


Fig. 55. *Cuspicona neocaledoniae* sp. nov., *Cuspicona cheesmanae* sp. nov. A-D. *Cuspicona neocaledoniae*. A. ventral aspect of apex of male abdomen. B. ventral aspect of apex of female abdomen. C. aedeagus from lefthand side. D. clasper. E. *Cuspicona cheesmanae*—ventral aspect of apex of female abdomen.

Remarks: Within the *simplex* group of species and commencing with *neocaledoniae* I have placed together a series of species in which the posterior margins of the first gonocoxae of the female are rather rectangularly produced in their inner half and the hind margin of the male pygophore has a small notch. Species in this final section of *Cuspicona* occur in the Philippines and Indonesia, possibly in South East Asia, Australia, New Caledonia and the New Hebrides.

Location of types:

Holotype ♂, allotype ♀, Forêt de Thi, New Caledonia, 8.II.1957 (Paris); 6♂♂ 4♀♀ 1? paratypes, same data as type; ♂ paratype, Noumea, New Caledonia, Sept. 1955, J. Rageau (Orstom—Noumea); 2♂♂ paratypes, Mt. Chapeau Gendarme, New Caledonia, in rain-forest 7 & 8.VI.1944, J. C. Harrud (Bishop); ♂ 2♀♀ paratypes (Reg. No. 62-7601), mountains

west of Houailou, New Caledonia, on *Solanum torvum* Sw. 5.II.1962, N. H. L. Krauss (USNM); ♂ paratype, Grotte de Ninrin-Reu near Poya, New Caledonia, at light 25.XII.1965, G. F. Gross on Biospelacological Expedition to New Caledonia; ♀ paratype, Noumea, New Caledonia, A. M. Lea (SAM).

Specimens Examined: The types only.

***Cuspicona cheesmanae* sp. nov.**

Figs. 55 E, 56

Description:

General appearance: Ground colour green in life, yellow in museum specimens. Lateral angles of pronotum rectangular, hardly or not produced; whole upperside except membrane moderately coarsely punctate. Rather elongate and kite-shaped.

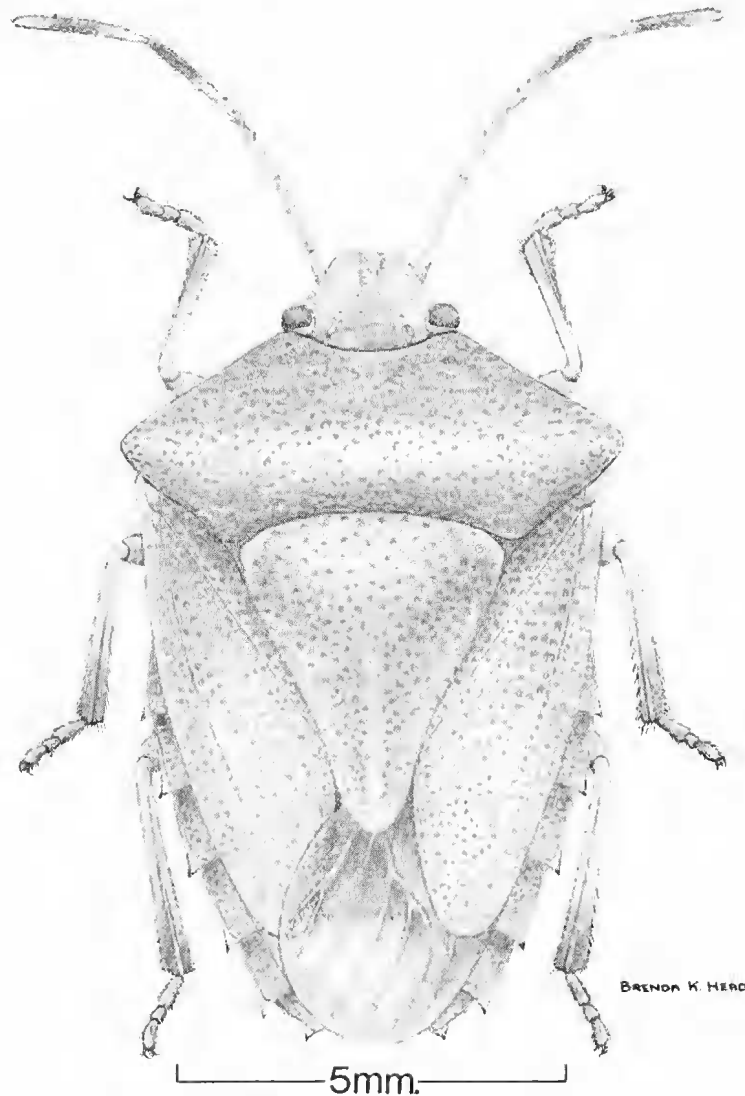


Fig. 56. Dorsal aspect of *Cuspicona cheesmanae* sp. nov.

Head: Concolorous, eyes and ocelli purplish. Wider than long. Densely punctate so as to appear rather rugulose.

Pronotum: Concolorous. Anterior margins strongly excavate behind collum, obliquely truncate behind eyes. Anterolateral margins almost straight, margins obtuse, lateral angles not produced beyond line of lateral margins and rectangular. Posterolateral margins shallowly bisinuate, posterior margin shallowly concave.

Scutellum: Concolorous; rather flat but with a distinct low, narrow, percurrent, median line; lateral margins in basal half faintly convex thence straight and converging only gradually to sub-acuminate apex.

Hemelytra: Coriaceous parts concolorous. Exterior margin of corium slightly concave in basal quarter, faintly convex in distal three-quarters; apical angle of corium strongly convex, posterior margin gently convex. Clavus short and narrow. Membrane with veins hyaline.

Abdomen: Concolorous.

Laterotergites: Concolorous; posterior exterior angles with a small but acute spine, minutely black tipped or not.

Underside: Concolorous. Bucculae low and sinuate, reaching almost to base, anteriorly more raised and rectangularly lobulate. First rostral segment robust, reaching to base of bucculae, second nearly straight and surpassing fore coxae, third just surpassing mid coxae and fourth comparatively short and reaching visible base of abdomen. Antennae concolorous but two distal segments faintly infuscated, fourth terminally and fifth medially; first segment not surpassing apex of head, second longer than third, fourth longer than second and fifth longest of all. Propleuron punctate all over except obtuse lateral margins, metapleuron punctate in only extreme posterior portion. Mesosternal keel reaching over prosternum to apex of latter, semicircularly raised in its anterior half. Legs normal, tibiae cylindrical. Abdomen strongly V-shaped. Male terminalia unknown, apex of female abdomen Fig. 55 E.

Dimensions—

Parameter	Holotype	Paratypes
Head length	34	32-37
Head width	40	38-42
Antennal segment I	10	8-10
Antennal segment II	19	19-21
Antennal segment III	10	15-19
Antennal segment IV	26	22
Antennal segment V	31	26
Pronotum width	115	107-117
Pronotum length	41	42-45
Total length	193	180-201

Total length: 9.4-10.5 mm

Remarks: This species is very similar in appearance to *privata* Walker which also occurs in the New Hebrides, but is more elongate and the lateral angles of the pronotum are more prominent and rectangular whereas in *privata* they are broadly rounded. In *cheesmanae* the inner halves of the posterior margins of the female gonocoxae are rectangularly produced, in *privata* this projection has its outer margin more inclined and the whole structure is more roundly produced. In *privata* the fore and middle tibiae are rather flattened apically above but not in *cheesmanae*. *Cheesmanae* is probably most closely related to *neocaledoniae*.

Location of Types:

Holotype ♀ (Reg. No. 20-660), Nokovula, Espiritu Santo, New Hebrides, 1100 m, by sweeping low herbage, 14.IX.1971, G. F. Gross on Royal Society—Percy Sladen Trust Expedition to the New Hebrides (SAM); 2 ♀ paratypes, Malekula, New Hebrides, Dec. 1929 and Jan. 1939, L. E. Cheesman, BM 1930-38 and BM 1930-178 (BM).

Specimens examined: The types only.

***Cuspicona forticornis* Breddin, 1900**

Figs. 57, 58 A-C

Cuspicona forticornis Breddin, 1900, p. 28 Fig. 2. Froggatt, 1902, p. 320 pl. 2, Fig. 17: 1907, pl. 32 Fig. 2.

Cuspicona rufispina Van Duzee 1905 (*non* Stål, 1870), p. 209.

Description:

General appearance: Ground colour probably green in life but yellow in museum specimens with produced lateral angles of pronotum red or pink. Punctuation relatively coarse and even over dorsal surface save on dorsum of head, there denser and appearing rugulose.

Head: Concolorous, densely punctate as described above. Wider than long. Eyes purplish, ocelli pink or concolorous.

Pronotum: Concolorous except for produced lateral angles which are usually red or pink. Latter strongly produced into a short, blunt, slightly upwardly and outward directed spine or horn, latter about two-thirds length of posterolateral margins, its apical portion impunctate. Calli impunctate. Anterior margin strongly and rather trapeziformly excavate behind collum, obliquely truncate behind eyes. Anterolateral margins obtuse and straight but diverging posteriorly in anterior half, then obtusely angled

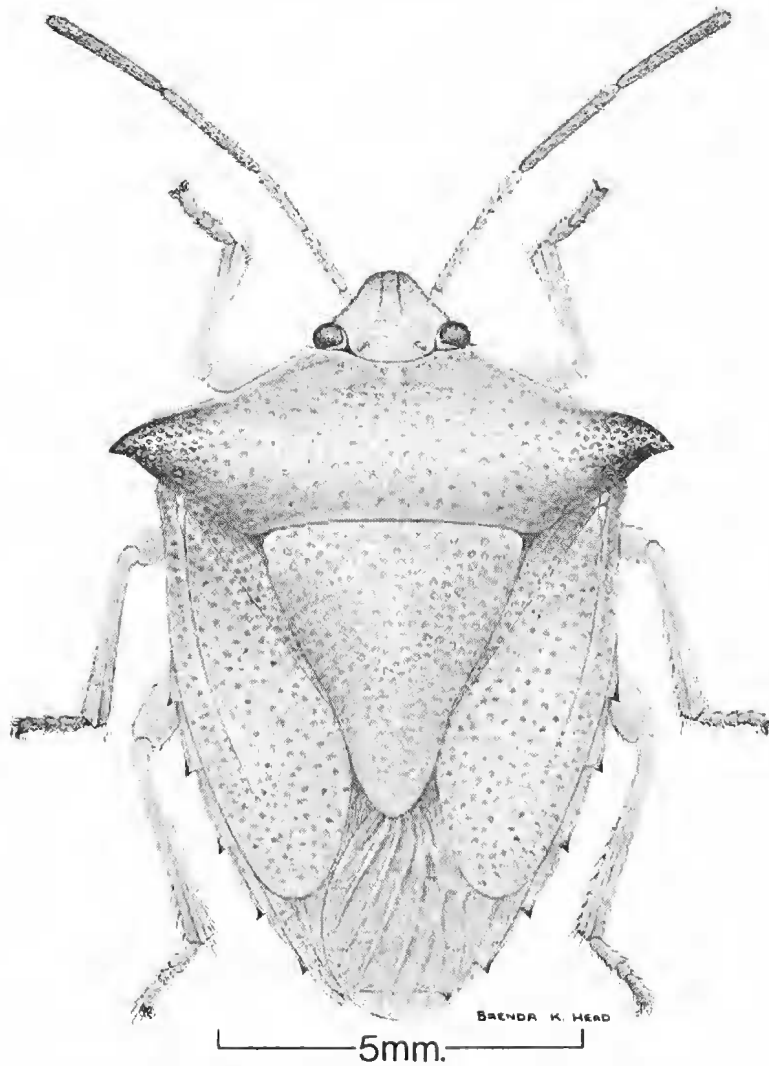


Fig. 57. Dorsal aspect of *Cuspicona forticornis* Breddin.

to form anterior margin of lateral spines. Posterolateral and posterior margins shallowly concave.

Scutellum: Concolorous; rather flat; lateral margins in basal half feebly convex, frena reaching about $\frac{2}{3}$ their length, at apices of frena concavely angulate, then straight and converging gradually to convex but narrowish apex.

Hemelytra: Coriaceous parts concolorous. Exterior margin of corium slightly concave in basal quarter, faintly convex in distal three-quarters; posterior margin of corium strongly convex. Clavus relatively short and narrow. Membrane hyaline with veins same colour.

Abdomen: Apparently concolorous, at least laterally.

Laterotergites: Concolorous; apical lateral angles minutely black spined; finely punctate in exterior half.

Underside: Head concolorous, occasionally lateral margins pink. Bucculae low and sinuate, reaching almost to base, anteriorly more raised and lobulate. First rostral segment robust, reaching to base of bucculae, second arched and surpassing fore coxae, third surpassing second coxae, fourth reaching nearly to base of fourth abdominal ventrite. Antennae concolorous or pale brown, second and third segments subequal, fourth and fifth much longer and subequal. Thorax concolorous except underside of produced lateral angles of prothorax red. Propleuron conspicuously punctate in posterior half and metapleuron in extreme posterior portion. Metasternal-mesossternal keel reaching over prosternum to apex, higher anteriorly than posteriorly. Legs normal, tibiae cylindrical; concolorous. Epipleuron faintly marked with brown spots.

Abdomen V-shaped in posterior view; concolorous but occasionally lateral margins pink.

Apex of male abdomen Fig. 58 A. Clasper, Fig. 58 C, F-shaped, medially rather robust with an obliquely directed upper ramus. Apex of female abdomen Fig. 58 B.

Dimensions—

Parameter	Mean of Males (7)	Mean of Females (7)
Head length	37	39
Head width	45	46
Antennal segment I	10	10
Antennal segment II	20	22
Antennal segment III	20	22
Antennal segment IV	32	32
Antennal segment V	33	33
Pronotum width	157	163
Pronotum length	42	43
Total length	214	222

Total length: 9.9-12.5 mm

Remarks: This species occurs in a fairly narrow belt in far eastern Australia ranging from New South Wales to Northern Queensland.

Location of Type:

Holotype ♂ of *forticornis* Breddin, "New South Wales" (not located).

Specimens examined:

Queensland ♂ ♀, Upper Mulgrave River, 20.IV.1970, G. B. Monteith; ♀, Gap Creek, 8 km (5 miles) north of Bloomfield River, 30 m (100ft.) 8-9.V.1970, G. B. Monteith UQ; 2 ♂ ♂, North Tambourine, on low bushes in grassland, 7.III.1955 M. B. Wilson QM; ♂, Caboolture River, Caboolture, on *Solanum*, 6.II.1959, T. G. Campbell ANIC; ♂, Rockhampton SAM; ♀, Mt. Glorious, Mar. 1963, J. E. Dunwoody BISHOP. New South Wales ♂, 3 km (2 miles) south of Port Macquarie, on *Solanum maritimum* Scop., 7.XI.1958, T. G. Campbell; ♀, Coffs Harbour, 20.X.1958, T. G. Campbell ANIC; ♀, Tweed River SAM; ♂ ♀, no precise locality but bearing labels (1) "347 N.S.Wales" (2) "Pres. by Perth Museum. BM 1953-629"; ♀, no precise locality but bearing label "347 N.S. Wales" AMNH (this is the specimen misidentified by Van Duzee as *rufispina* Stål).

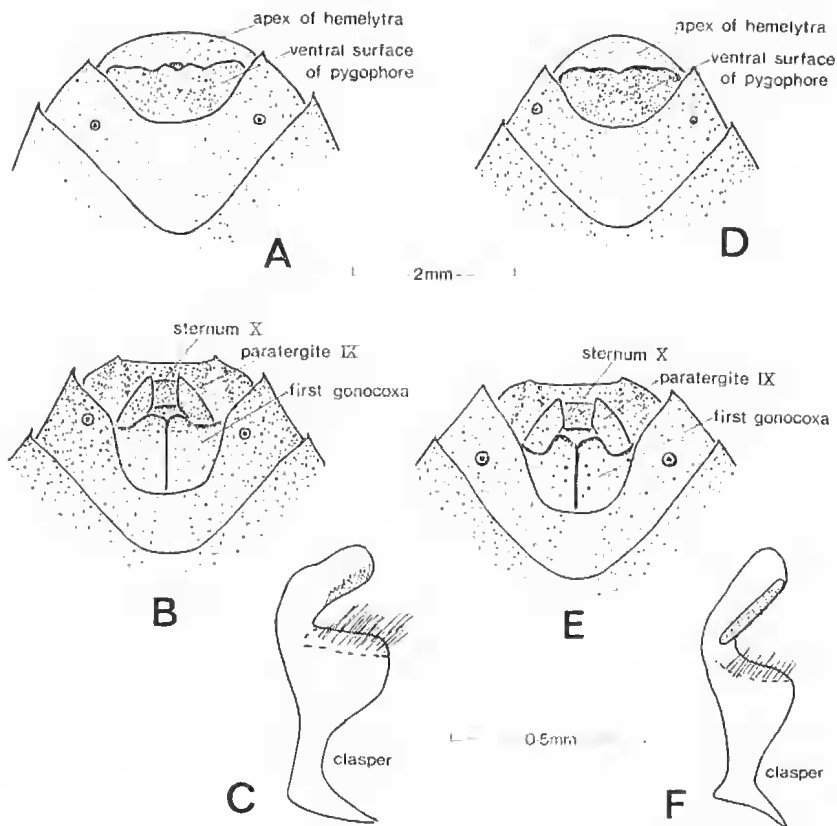


Fig. 58. *Cuspicona forticornis* Breddin, *Cuspicona exnigrospera* sp. nov. A-C. *Cuspicona forticornis*. A. ventral aspect of apex of male abdomen. B. ventral aspect of apex of female abdomen. C. clasper. D-F. *Cuspicona exnigrospera*. D. ventral aspect of apex of male abdomen. E. ventral aspect of apex of female abdomen. F. clasper.

Cuspicona exnigrospersa sp. nov.

Figs. 58 D-F, 59

Description:

General appearance: Ground colour probably green in life but yellow in museum specimens with produced lateral angles of pronotum and extreme lateral margins of head and abdomen red, and with black spots and black marks laterally on sides of pronotum and abdomen.

Punctuation relatively coarse and even over dorsal surface save on dorsum of head, there denser and appearing rugulose.

Head: Concolorous with extreme lateral margin frequently red or pink; wider than long. Eyes purplish, ocelli pink or concolorous. Densely punctate so as to appear rather rugulose. Much wider than long; first antennal segment not surpassing apex.

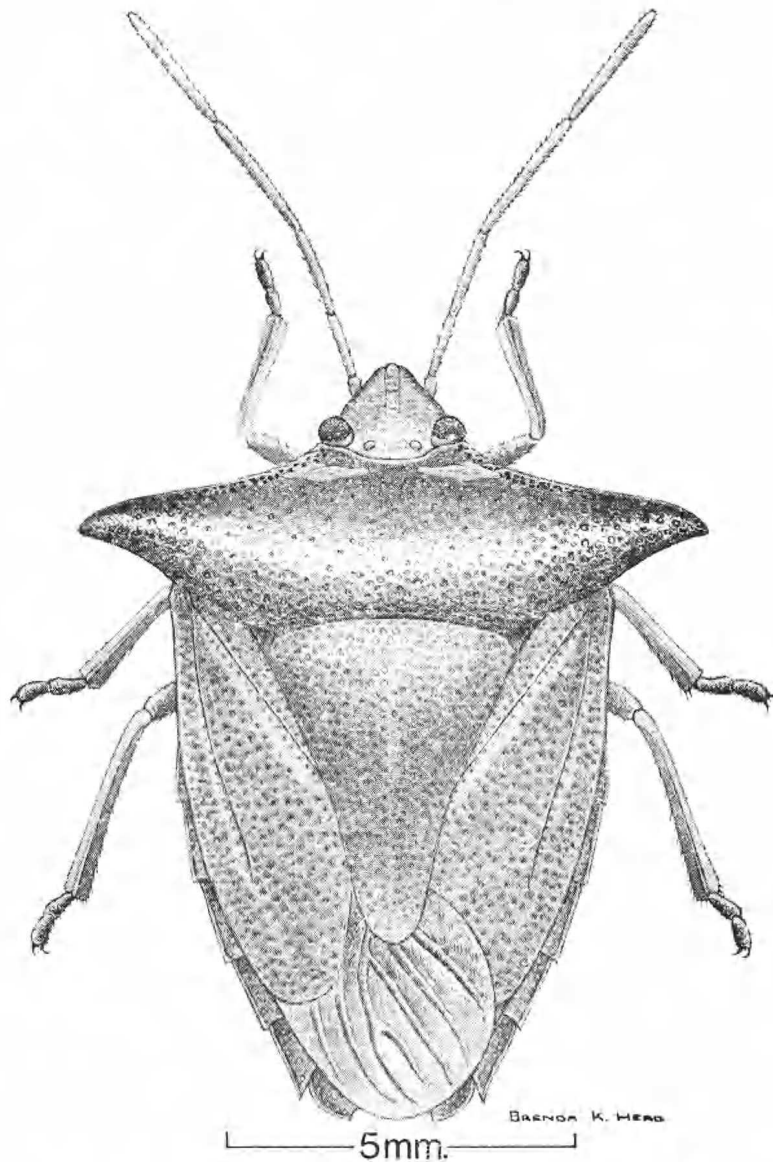


Fig. 59. Dorsal aspect of *Cuspicona exnigrospersa* sp. nov.

Pronotum: Concolorous except along antero-lateral margins (maculated with black) and produced lateral angles (red or pink). Latter strongly produced into a blunt upwardly and outward directed, strong, apically slightly recurved spinous processes, these as long or longer than posterolateral margins. Apical portions of these

spines impunctate. Calli impunctate. Anterior margin strongly and rather obtuse angledly excavate behind collum, obliquely truncate behind eyes. Anterolateral margins in front of spinous lateral angles rather concave and obtuse. Posterolateral margins nearly straight, posterior margins shallowly concave.

Scutellum: Concolorous; rather flat, lateral margins basally feebly convex, frena reaching about $\frac{3}{4}$ the length, at apices of frena rather angulate, thence straight and converging only gradually to convex but narrowish apex.

Hemelytra: Coriaceous parts concolorous, in some specimens basal half of exterior margin of corium pinkish or pinkish with black spots. Exterior margin of corium slightly concave in basal quarter, faintly convex in distal three-quarters; posterior margin of corium strongly convex. Clavus relatively short and narrow. Membrane hyaline with veins same colour.

Abdomen: Apparently concolorous, at least laterally.

Laterotergites: Apical lateral angles acute or minutely spined; lateral margins broadly pink, in some specimens this pink bordered exteriorly and very narrowly with black; inner halves concolorous.

Underside: Head concolorous, occasionally lateral margins pink or red. Bucculae low and sinuate, reaching almost to base, anteriorly more raised and rectangularly lobulate. First rostral segment robust, reaching to base of bucculae,

second curved and surpassing first coxae, third just surpassing second coxae and fourth reaching about middle of third abdominal segment, latter apically black. Antennae concolorous or pale brown, second and third segments subequal in length, fourth longer and fifth longest. Thorax concolorous except for exterior margins of prothorax which are black spotted and hind margin of produced lateral angles may have a thin black line, produced lateral angles themselves red or pink beneath. Propleuron conspicuously punctate in posterior half and metapleuron in extreme posterior portion. Metasternal-mesosternal keel reaching over prosternum almost to apex, higher anteriorly than posteriorly. Legs normal, tibiae cylindrical; concolorous except apices of tibiae and tarsi tending reddish brown. Epipleuron maculated with black.

Abdomen V-shaped in posterior view; concolorous but lateral margins frequently reddish or pinkish, sometimes exteriorly to this narrowly black. Apex of male abdomen Fig. 58 D, posterior margin of pygophore black. Clasper Fig. 58 F, strongly F-shaped and upper ramus more vertically directed than in *forticornis* and with an opaque bar visible in its ventral area. Apex of female abdomen Fig. 58 E.

Dimensions—	Parameter	Holotype	Allotype	Mean of all Males (8)	Mean of all Females (3)
Head length	34	35	33	34
Head width	42	44	41	43
Antennal segment I	10	11	10	11
Antennal segment II	19	22	20	23
Antennal segment III	22	25	21	23
Antennal segment IV	33	38	32	38
Antennal segment V	36	—	35	—
Pronotum width	180	185	163	177
Pronotum length	42	45	39	40
Total length	205	225	196	207

*Total length: 10.7-11.7 mm

Remarks: This species is clearly closely related to *forticornis* but differs from it in the longer spine formed by the production of the anterolateral margins of the pronotum and the lateral black spots on the pronotum and epipleuron. The male and female external genitalia look very similar but in the male of *exnigrospersa* the medial "notch" on the posterior margin does not have the two little produced lobes, one on either side of it, which occur in *forticornis*. The posterior margin is also usually black in *exnigrospersa* but not in *forticornis*. In the female *exnigrospersa* the posterior margins of the first gonocoxae are more deeply excised than in *forticornis*. The clasper of *exnigrospersa* is narrower than that of *forticornis* and the upper ramus is more vertically directed.

This species seems to occur only in a limited area near the eastern portion of the Queensland-New South Wales border.

Location of types:

Holotype ♂ (Reg. No. K51604), 2 ♂ ♂ paratypes (Reg. Nos. both K51267), Mt. Tambourine, Queensland, Oct. 1924, A. Musgrave & C. Geissman AM; allotype ♀, National Park, Queensland, Dec. 1910, H. Hacker (with additional label Brit. Mus. 1926-241) BM; ♂ ♂ paratypes (Reg. Nos. I20,658-9), Mt. Tambourine, Queensland, A. M. Lea SAM; ♂ ♀ paratypes, Tambourine Mountain, H. Hacker; ♂ paratype, Tambourine, 21.II.1927, H. Hacker OM; ♀ paratype Lamington National Park, Queensland, 17-21.II.1964, G. Monteith &

H. A. Rose UQ; ♀ paratype, New South Wales STOCKHOLM; ♂ paratype, Tambourine, Queensland, 500-550 m, 15.II.1964, J. Sedlacek BISHOP.

Specimens examined: The types only.

***Cuspicona rufispina* Stål, 1870**

Cuspicona rufispina Stål, 1870 p. 636; 1876, p. 103.

Remarks:

This Philippine species was erroneously reported from Australia by Van Duzee (1905, p. 209) but a re-examination of the specimen Van Duzee saw reveals that it is in fact an example of *C. forticornis* Breddin.

Cuspicona rufispina is very similar in appearance to *C. exnigrospersa* but differs from it in lacking the black speckling along the anterolateral margin of the pronotum and on the epipleuron, and the black marks along the margins of the abdomen (as seen from below or in side view). In addition in *rufispina* the head is only about 5-10% shorter than its width across the eyes and the third antennal segment is about 15% shorter than the second. In *exnigrospersa*

the head is 15% or more shorter than its width across the eyes and the second and third antennal segments are about the same length.

The male pygophore from beneath and the female external genitalia from below resemble more closely those of *C. forticornis* but *rufispina* differs from this species in the much longer lateral spines of the pronotum, in its relatively longer head, and in the third antennal segment being shorter than the second; in *forticornis* as in *exnigrospersa* the head is shorter than wide and the second and third antennal segments are about the same length.

Cuspicona rufispina is clearly closely allied to *forticornis*, *exnigrospersa*, *neocaledoniae* and to a lesser extent to *proxima* Walker. In the consignment of *Cuspicona* species lent to me by the British Museum (Natural History) were three further specimens belonging to two species, probably both undescribed, one from Mindanao in the Philippines and the other from Tondano in the Celebes, which, though the lateral spines of the pronotum are concolorous, are clearly also members of this same group of species.

Comparative measurements (in eyepiece divisions) on all of these specimens are:

	Holotype ♂ of <i>rufispina</i>	Allotype ♀ of <i>rufispina</i>	No. 1 ♂ Mindanao	No. 2 ♂ Mindanao	♂ Tondano
Head length	40	40	32	43	39
Head width	42	44	44	46	43
Antennal segment I	10	10	11	10	9
Antennal segment II	24	24	24	25	21
Antennal segment III	20	21	30	27	24
Antennal segment IV	—	33	40	—	31
Antennal segment V	—	36	41	—	—
Pronotum width	165	180	170	182	165
Pronotum length	40	40	40	40	38
Total length	205	208	230	240	200

Very likely *Cuspicona curtispina* Stål 1861 from Java belongs to this same complex and requires further investigation. It is probable that the major differences between these species, as in the case of *simplex*, *proxima*, *neocaledoniae*, *cheesmanae*, *forticornis* and *exnigrospersa*, would lie in the length and colour of the lateral spines of the pronotum and in the structure of the claspers of the males.

Location of Types:

Holotype ♂ and allotype ♀, Ins. Philipp. Stockholm.

***Everardia* gen. nov.**

Type species: *Everardia picta* sp. nov.

Description:

General appearance: Type species bright green and red in life, smallish, rather oval,

anterolateral margins of pronotum at first straight and diverging posteriorad, then at about midway angled more strongly exteriorly though still straight, lateral angles subacute or rounded. Head and anterior part of pronotum inclined at an angle of about 45° to rest of body.

Head: Not appearing elongate, wider across eyes than long, lateral margins strongly concave in front of eyes, juga then rounding broadly to apex, apex of head wide, juga not surpassing apex of anteclypeus, latter rather broad. Eyes rather triangular and touching anterior margin of pronotum, ocelli conspicuous and placed about midway between inner margin of eyes and centre of head, but somewhat behind level of kind margin of eyes. Antennifers short, antennae five segmented, segments I, IV and V, thicker than II and III; antennae not very long.

Pronotum: About twice as wide as long, anterior margin strongly but obliquely truncate behind eyes, then deeply excavate behind collum, anterolateral angles only very minutely prominent. Anterolateral margins straight or slightly concave in anterior half and diverging gradually posteriorad, at about mid length abruptly angling exteriorly to diverge much more strongly to obtuse or subacute lateral angles. Posterolateral margins rather rectangularly excavate, angularly turning to become the truncate posterior margin. Disc behind lateral angles in same plane as hind body, before level of lateral angles inclined downwards at about 45° .

Scutellum: Elongately triangular, anteriorly rather raised, lateral margins anteriorly rather convex, medially rather concave, apex broadly rounded. Frena extending half length from base to apex.

Hemelytra: Coriaceous parts normally thickened. Corium with lateral margins basally thickened then concave, behind this straight to almost subacute apex, posterior margin strongly convex. Clavus strongly triangular. Membrane with veins substantially parallel except at base.

Abdomen: Rather flat above and slightly excavate in males and truncate apically in females.

Laterotergites: Three to seven armed with a short acute spine on posterior exterior angles.

Underside: Head obtusely triangular in lateral view. Bucculae faintly lobulately produced anteriorly and then vaguely sinuate, reaching to above middle of eyes, between bucculae deeply sulcate. Rostrum four segmented, first segment reaching base of bucculae, second just past fore coxae, third just to second coxae and fourth to

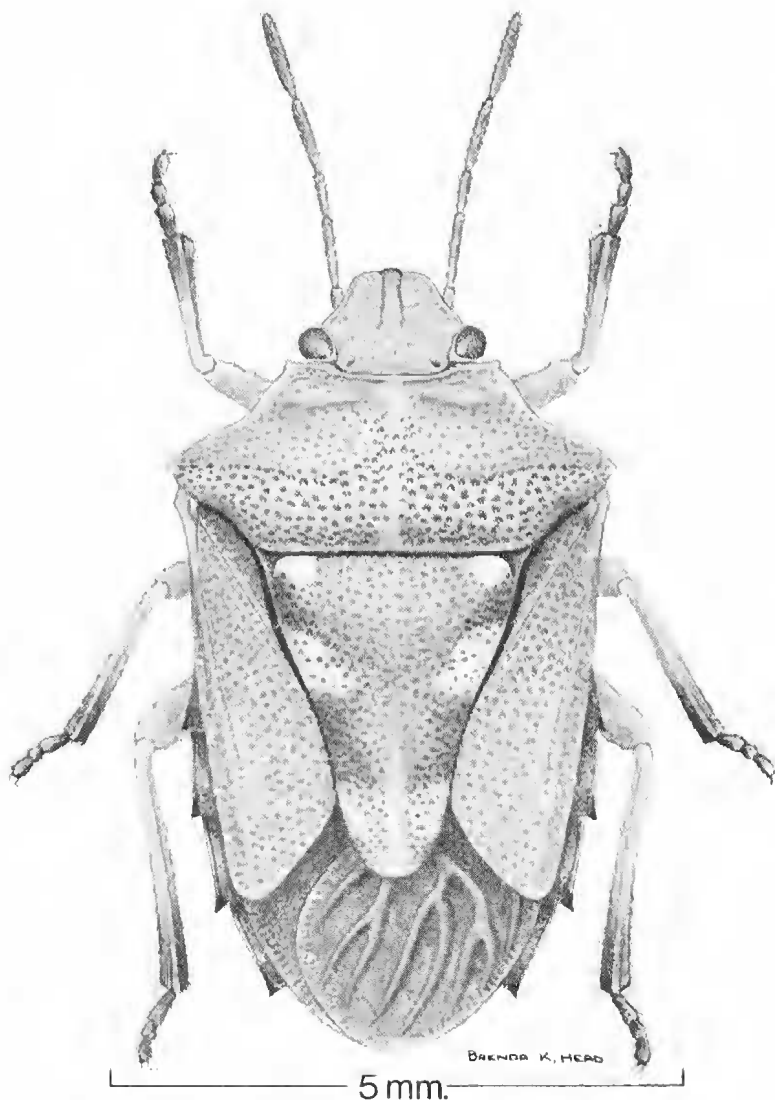


Fig. 60. Dorsal aspect of *Everardia picta* gen. et sp. nov.

about hind coxae. Meso- and metasterna with a robust keel projecting over posterior portion of prosternum, latter broadly sulcate under the keel. Abdominal venter more or less semicircular in cross section in posterior view, third segment medially raised into a short triangular tubercle directed anteriorly, its apex fitting into a notch in the metasternal keel. Seventh ventrite in males excised posteriorly and in females much more deeply incised. Pygophore with lateral angles produced and rounded and medially on posterior ventral margin a small process. Aedeagus with phallosoma lightly sclerotized, a prominent pair of anterior conjunctival processes and with ventrally placed and directed, parallel, rather bilobed medial penial plates. Clasper rather F-shaped. Female external genitalia flattened medially.

General Remarks: Only the type species known of this genus. At first appearance the species looks rather like a *Cuspicona* but the strongly uncised lateral angles of the pronotum

indicates that it is a separate genus. The structure of the aedeagus indicates a close relationship to *Cuspicona* and *Petalaspis*.

Everardia picta sp. nov.

Figs. 60, 61 A-E

Description:

General appearance: Ground colour green in life, yellow in museum specimens, with red, yellow, luteous and black markings; hind part of scutellum coarsely punctate, scutellum and coriaceous parts of hemelytra more finely punctate.

Head: Concolorous; juga transversely wrinkled; base rugose punctate or impunctate and slightly swollen; eyes and ocelli reddish purple.

Pronotum: Concolorous in anterior half except along midline (luteous); about halfway back a transverse fine sinuate red line projecting

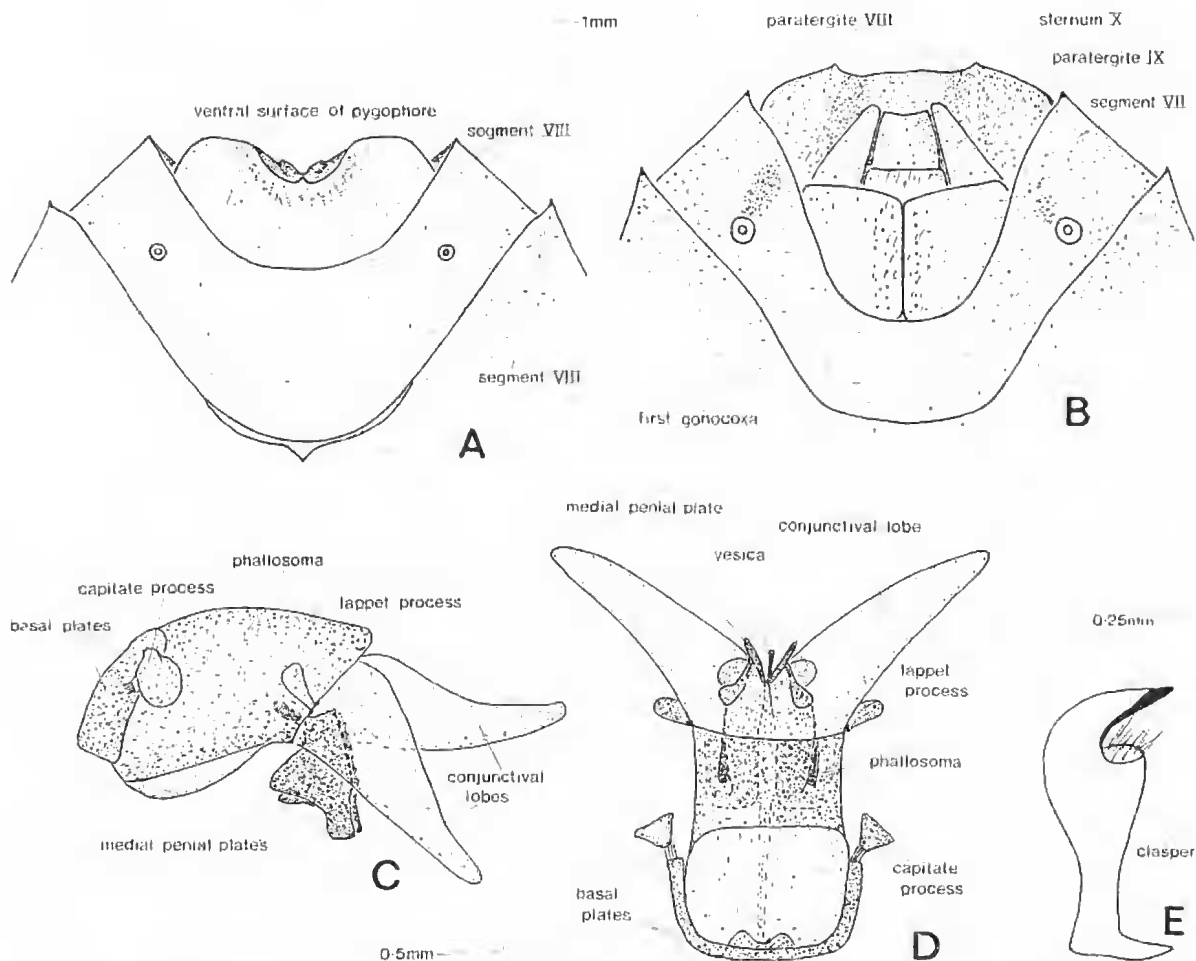


Fig. 61. *Everardia picta* gen. et sp. nov. A. ventral aspect of apex of male abdomen. B. ventral aspect of apex of female abdomen. C. left-hand side view of aedeagus. D. ventral view of aedeagus. E. clasper.

forward medially, behind this line luteous with red punctations, anteriorly punctations concolorous. Midline almost glabrous, anterior margin reflexed, immediately behind it a single transverse line of coarse punctations, calli impunctate, behind calli coarsely punctate.

Scutellum: Medially in basal half concolorous lateral margins (broadly) and apical third luteous, a red fascia on each side just outward a luteous callous point in each basal angle, another at medial concavity of pronotum on each side and obscuring the luteous margin in this region, and a smaller one on each side just before apex. In apical third of scutellum and along lateral margins some red punctations, punctations on basal two-thirds medially concolorous; frena black.

Hemelytra: Coriaceous parts concolorous with concolorous punctations, inner margin of clavus (at very base quite broadly, rest narrowly) black, inner sixth of hind margin of corium also black. Membrane hyaline.

Abdomen: Concolorous with black quadrate spots or paired more rounded spots medially on some of the distal segments, genital segment concolorous.

Laterotergites: Concolorous with a red spot or bar along anterior and posterior margins and posterior portion of exterior margins, spines tipped with black.

Underside: Head concolorous; bucculae low and sinuate, apically a little rectangularly produced, reaching only to about anterior margin of eyes, head rather swollen behind bucculae. Fourth rostral segment black.

Thorax concolorous but with a red spot at common base of episterna and epimera. Lcgs normal, tibiae cylindrical or vaguely flattened.

Abdomen concolorous but with a small red spot laterally in the anterior angle, and lateral margin in posterior quarter red, of each segment. Apex of male abdomen Fig. 61 A. Clasper Fig. 61 E, F-shaped.

Aedeagus Fig. 61 C-D, with phallosoma very lightly sclerotized and honey coloured, probably the conjunctiva was not completely inflated in the dissections but the "lappet" processes are strongly developed, there are two rather tubular conjunctival lobes and the medial penial plates are large, parallel and ventrally placed and directed, their ventral surfaces strongly concave. Apex of female abdomen Fig. 61 B.

MALES (from 11 specimens)

Dimensions—	Parameter	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length		26	1.6	6.0	23-28
Head width		35	1.4	4.0	33-38
Antennal segment I		6	0.5	8.3	5-7
Antennal segment II		14	0.8	5.3	13-15
Antennal segment III		9	1.1	11.6	8-11
Antennal segment IV		14	1.0	7.3	13-16
Antennal segment V		16	0.5	3.3	15-16
Pronotum width		77	3.4	4.4	71-81
Pronotum length		32	2.0	6.3	29-36
Total length		141	8.2	5.8	125-150

FEMALES (from 17 specimens)

Parameter	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	28	2.2	7.8	25-31
Head width	36	1.1	3.2	34-38
Antennal segment I	7	1.5	22.4	5-10
Antennal segment II	13	1.1	8.2	11-15
Antennal segment III	9	0.8	9.0	7-10
Antennal segment IV	14	1.1	8.3	11-15
Antennal segment V	15	1.1	7.3	13-18
Pronotum width	81	3.5	4.3	75-88
Pronotum length	34	2.6	7.6	30-39
Total length	148	8.7	5.8	135-165

Total length: 6.5-8.6 mm

Remarks: All but two specimens have been collected in arid regions. The "tea-tree" mentioned by Brumby on the labels of the specimens he collected may be a species of *Melaleuca* for

this genus occurs in the Everard Ranges area, but equally he could have applied it to a species of *Thryptomene* as the latter, apart from its small size, resembles *Melaleuca*.

Location of Types:

Holotype ♂, allotype ♀, 8 ♂♂, 10 ♀♀, paratypes (Reg. Nos. I20,634-53), Everard Ranges, South Australia to Warburton Ranges, Western Australia, A. Brumby (paratypes on flowering tea-tree): 1 ♂, 1 ♀ paratypes (Reg. Nos. I20,654-5), Victoria Desert 6 km (= 4 miles) south west of Maynard's Bore, Everard Park Station, South Australia, 6.IX.1970, G. F. Gross (by beating *Thryptomene maisonneuvei* FvM.—a small myrtaceous plant); ♂ paratype (Reg. No. I20,656), Adelaide Hills, South Australia, Jan. 1968 and ♀ paratype (Reg. No. I20,657), same general locality, 20.1.69, C. van Dyk SAM; 3 ♀♀ paratypes, Murchison River, Western Australia, 21. XI.1963, J. Sedlacek (BISHOP); ♀ paratype, 48 km (= 30 miles) east of Southern Cross, 350 m, Western Australia, 16.IX.1962, E. S. Ross & D. Q. Cavagnaro CA.

Specimens examined: The types only.

Parocirrhoe gen. nov.

Type species: *Parocirrhoe woodwardi* sp. nov.

Description:

General appearance: Very similar to *Ocirrhoe* but posterior angles of seventh laterotergites strongly produced and pygophore different. Species probably bright green in life; small, elongate oval, lateral angles of pronotum rounded; head and anterior portion inclined at an angle of about 30°.

Head: Appearing rather broad, wider across eyes than long, basally rather raised, apically flattened. Anteclypeus only a very little produced past apices of juga and convex apically, juga apically broadly rounded and laterally broadly concave above antennifers. Eyes triangular and touching anterior margin of pronotum, ocelli conspicuous and placed just inward of inner posterior angles of eyes. Antennifers short, antennae five segmented, first segment shorter and thicker than others.

Pronotum: More than twice as wide as long, anterior margin only shallowly concave behind collum, anterolateral angles only very slightly prominent. Anterolateral margins nearly straight almost to base and strongly diverging posteriorly, anterolateral angles rounded. Posterolateral margins rather angulately concave, posterior margin shallowly concave. Disc behind level of

lateral angles in the same plane as hind body, in front of level of lateral angles inclined downwards at about 30°.

Scutellum: Triangular, flattish; frena extending for nearly half length from base to apex; in basal third only slightly raised.

Hemelytra: Coriaceous parts rather transparent. Corium with outer apical angles rounded and lateral margins very slightly convex, posterior margin also faintly convex. Clavus narrow but triangular. Membrane with veins substantially parallel apically.

Abdomen: Apparently flattish above, deeply excised apically in males.

Laterotergites: III to VI armed with a small acute spine on each posterior exterior angle, VII with apical angle rather strongly produced posteriorly, triangular with acute apex.

Underside: Head rather triangular in lateral view. Bucculae rather lobulately produced anteriorly then convex, reaching to about midway along eyes, between bucculae deeply sulcate. Rostrum four segmented, segment I not reaching base of bucculae, II a little past fore coxae, III about midway between second and third coxae, IV to base of third abdominal ventrite. Meso- and metasterna with a robust raised keel projecting forward over prosternum, low to about midway between mid and hind coxae then becoming elevated to reach its highest elevation just before fore coxae, prothorax shallowly and obliquely keeled on either side of this keel. Abdominal venter beneath with sides flattened and oblique, medially rounded, third segment medially raised into a short triangular tubercle directed anteriorly, its apex fitting into a notch in the mesosternal keel. Seventh abdominal segment deeply incised. Pygophore ventrally with lateral angles slightly produced medianly into a posteriorly directed triangular process. Hind margins of first gonocoxae of females transverse.

General Remarks: At first sight this genus resembles *Ocirrhoe* very closely and could easily be confused with it. However it differs in that the apical angles of the seventh laterotergites are much more strongly produced and the hind tibiae are not flattened (although the first and second are flattened just before their apices). The median triangular spine on the hind margin of the pygophore indicates that the genus has a closer relationship with such genera as *Petalapis*, *Vitellus* and *Avicenna* rather than to *Ocirrhoe*. Only the type species is known.

***Parocirrhoe woodwardi* sp. nov.**

Figs. 48 F, 53 D, 62

Description:

General appearance: Probably green in life but the type yellowish, smallish.

Head: Concolorous, eyes and ocelli purplish. Juga dorsally punctate, anteclypeus with only several sparse punctations. Head behind base of anteclypeus transversely rugulose, immediately adjacent to eyes glabrous.

Pronotum: Concolorous, densely punctate but ocelli and anterolateral margins impunctate.

Scutellum: Concolorous, densely punctate. In apical half medially a broad flattened (but punctate) mark becoming a short raised impunctate keel apically.

Hemelytra: Coriaceous parts concolorous, densely punctate; membrane hyaline.

Abdomen: Concolorous.

Laterotergites: Concolorous, posterior lateral spines black tipped.

Underside: Concolorous except eyes purplish and a lateral black irregular macula near exterior margin of metapleuron and about equidistant from base and apex. Apical halves of tarsal claws black. Head slightly rugulose and depressed in front of antennifers. Propleuron conspicuously punctate only posteriorly, mesopleuron with only mesepisternum punctate, metapleuron punctate posteriorly and on metepisternum. Abdomen rather rugulose. Apex of male abdomen Fig. 53 D, the ventral margin

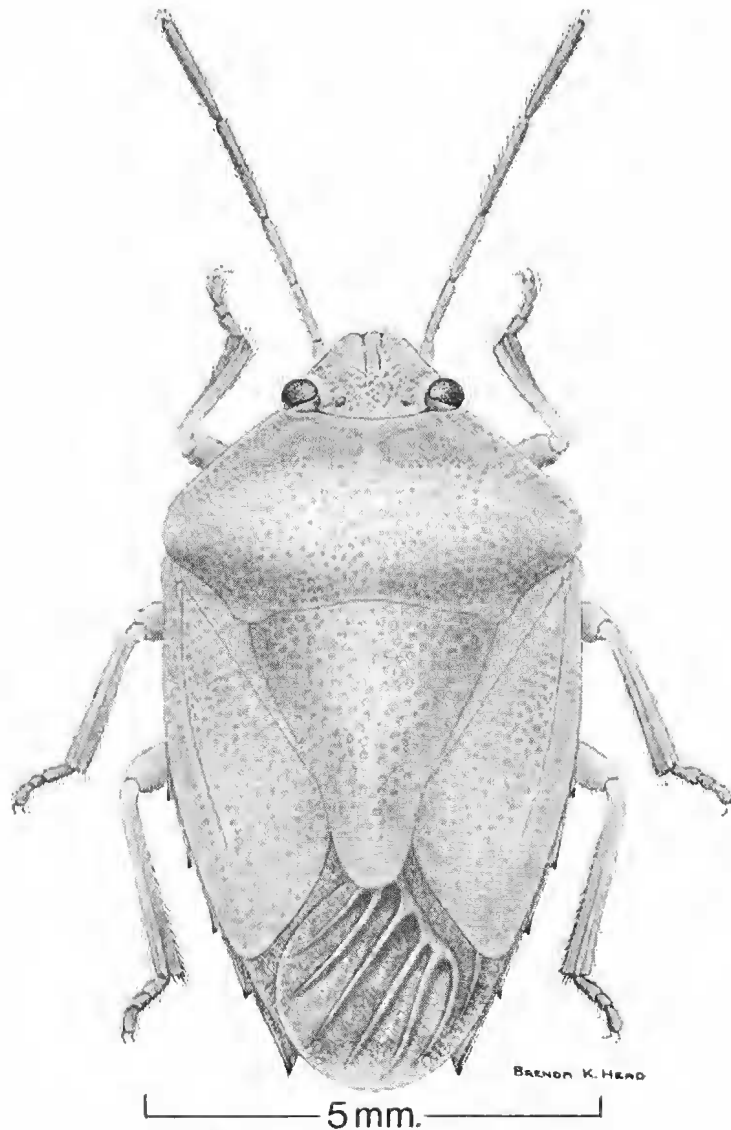


Fig. 62. Dorsal aspect of *Parocirrhoe woodwardi* gen. et. sp. nov.

of pygophore sinuate on either side of median process, ventral surface with a depressed pit on each side near spine margin and about midway between median process and lateral margin. Apex of female abdomen Fig. 48 F, posterior margins of first gonocoxae nearly transverse, apical spines of paratergite VIII strongly produced.

Dimensions—

	Holotype ♂	Allotype	Paratype
Head length	30	33	33
Head width	38	41	39
Antennal segment I	7	8	8
Antennal segment II	13	12	12
Antennal segment III	15	16	16
Antennal segment IV	20	22	21
Antennal segment V	25	27	25
Pronotum width	91	97	91
Pronotum length	37	31	40
Total length	165	170	181

Total length: 8.7-9.0 mm

Location of types:

Holotype ♂ (Reg. No. T7218), South Queensland, Koongalala Point, Lamington National Park, 29.X.1955. T. E. Woodward OM, allotype ♀, Dorrigo, New South Wales, W. Heron SAM I20,661; Paratype ♀, Sydney, Sept. 1902, ex Helms Collection BISHOP.

Specimens examined: The types and unlocalised 1 ♂, BM.

Petalaspis Bergroth, 1916

Peta'aspis Bergroth, 1916, p. 29.

Type species: *Petalaspis tescorum* Bergroth, 1916 (monotypy).

Description:

General appearance: Pale yellowish (museum specimens); medium sized, elongate oval lateral angles of pronotum acute. Head and anterior portion of pronotum inclined at an angle of about 45°.

Head: Rather elongate but still wider across eyes than long, tapering anteriorad, basally slightly convex, apically flattened. Anteclypeus a little produced beyond apices of juga and rounded apically; juga apically rounded, laterally slightly concave above antennifers. Eyes rather triangular and touching anterior margin of pronotum, ocelli conspicuous and placed just inward of inner posterior angles of eyes. Antennifers short, antennae five segmented, first segment shortest and thicker than others.

Pronotum: About twice as wide as long. Anterior margin rather concave, anterolateral angles only very slightly prominent. Anterolateral margins straight almost to base and strongly diverging posteriorly, then turning inward shortly at 90° forming rectangular lateral angles. Posterolateral margins strongly concave and rounding broadly to become the strongly concave posterior margin. Disc behind level of lateral angles in same plane as hind body, before level of lateral angles inclined downwards at about 45°.

Scutellum: Strongly triangular, flattish, frena extending for four fifths of length from base to true apex. Apex beneath with a square pale sclerotized plate, latter in plane of body and beginning at apices of frena and extending about an equal distance past true apex of scutellum.

Hemelytra: Coriaceous parts pale and rather transparent. Corium with outer apical angles almost truncate and lateral margins very slightly convex, posterior margin straight exteriorly but broadly rounded interiorly. Clavus strongly triangular. Membrane hyaline, veins substantially parallel apically.

Abdomen: Flattish above, rather deeply excised apically in males.

Laterotergites: Three to six armed on posterior exterior angles with a short acute spine, seven with apical angle rather strongly triangularly produced posteriorly with apex acute.

Underside: Head rather triangular in lateral view. Bucculae rather lobulately produced anteriorly then rather sinuate, reaching base of eyes, between bucculae rather deeply sulcate. Rostrum four segmented, first segment reaching base of bucculae, second to about midway between fore and hind coxae, third to about midway between second and third coxae, fourth to base of fourth abdominal ventrite. Meso- and metasterna with a robust raised keel projecting forward over prothorax, there directed somewhat to left (as viewed from below) so that rostrum passes to right of its apex. Prosternum rather sulcate under this keel. Abdominal venter beneath with sides flattened and oblique, medially broadly raised, third segment medially raised into a short triangular tubercle directed anteriorly, its apex fitting into a notch on base of metasternal keel. Seventh ventrite deeply excised posteriorly in males and females. Pygophore ventrally with lateral angles produced a little and truncate, medially with a posteriorly directed process. Clasper rather

F-shaped and similar to that of *Cuspicona* spp. Aedeagus with phallosoma lightly sclerotized, three pairs of conjunctival processes the ventral pair apparently medial penial plates. Female external genitalia rather flattened medially.

General remarks: Only the type species is known in this genus, in general appearance species is very similar to some species of *Cuspicona* which do not have produced lateral angles to the pronotum. However the square plate like structure under the apex of the scutellum distinguishes this genus from *Cuspicona* and indicates a relationship closer to *Vitellus*.

***Petalaspis tescorum* Bergroth, 1916**

Figs. 63, 64 A-D

Petalaspis tescorum Bergroth, 1916, p. 29-30.

Description:

General appearance: Moderate sized, elongate obovate. General colour straw coloured

but with lateral angles of the pronotum sometimes narrowly reddish, also the posterior apices of the seventh laterotergites and the genital segments. Dorsally finely and concolorously punctate.

Head: Juga rather finely transversely wrinkled; base finely punctate; eyes and ocelli reddish purple. First antennal segment not surpassing apex.

Pronotum: Finely punctate, punctations generally concolorous but sometimes a little darker than ground colour. Calli impunctate. Sometimes a faint reddish suffusion posteriorly.

Scutellum: Finely punctate, punctations generally (but not always) concolorous. Medially in basal half a raised nearly glabrous line.

Hemelytra: Corium and clavus finely concolorously punctate. A small black spot at apex of clavus; membrane including its veins hyaline.

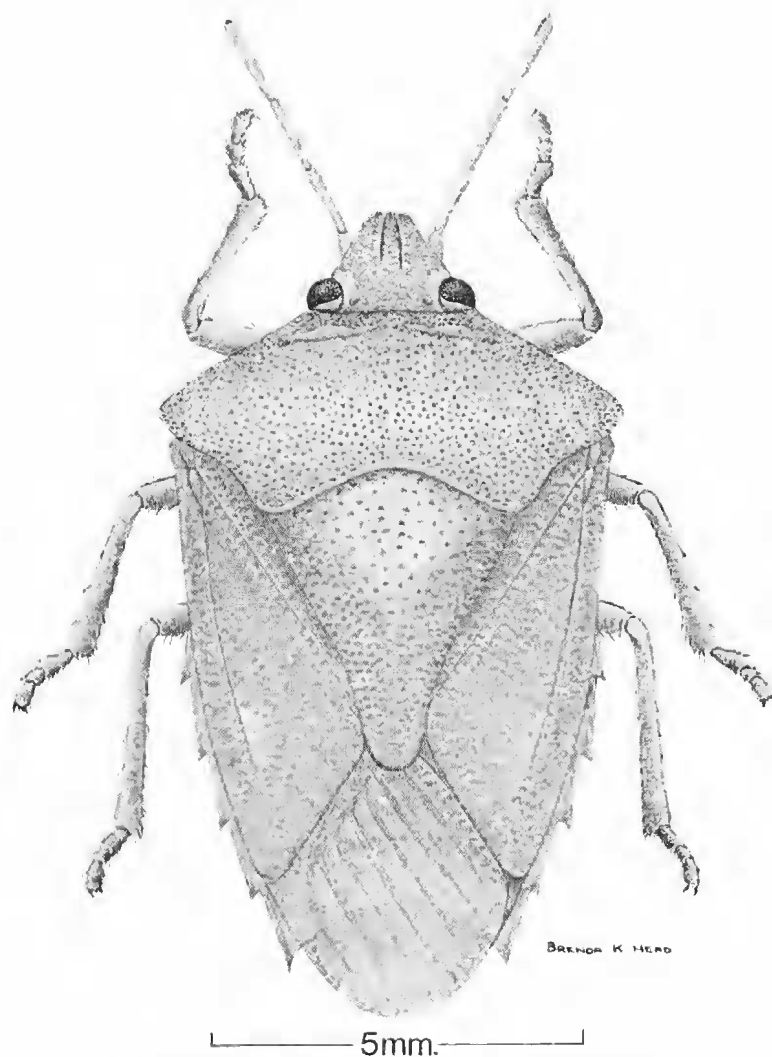


Fig. 63. Dorsal aspect *Petalaspis tescorum* Bergroth.

Laterotergites: Posterior angles of III to VI with small backwardly directed black tipped spines, posterior angle of VII produced into a much larger flattened posteriorly directed spine; this spine, posterior margin of laterotergite VII and posterior margin of last abdominal segment reddish.

Underside: Bucculae low and sinuate, not reaching base of head, rounded anteriorly. Head laterally rather swollen below antennifers. First segment of rostrum reaching to about level of base of antennifers, second segment curved and reaching just behind fore coxae, third segment to just behind middle coxae, fourth segment to base of fourth abdominal ventrite. Rostrum yellow with pale reddish infusion, tip of apical segment black.

Raised keel of mesosternum thickish, protruding over prosternum and close to it (latter narrowly and shallowly sulcate anteriorly), almost reaching base of head, apically shortly

truncate. Raised keel of metasternum darker, thicker, much shorter, posteriorly excavate to receive apex of ventral spine. Legs normal, tibiae cylindrical.

Third ventrite of abdomen medially raised in a thick forwardly directed spine, all visible ventrites rather V-shaped as viewed from rear of animal. Spinous projections of seventh laterotergites and apical portions of visible genitalia, frequently reddish, sometimes also ventral midline and base of abdomen. Apex of male abdomen Fig. 64 A. Clasper Fig. 64 D, rather F-shaped. Aedeagus Fig. 64 C, with phallosoma very lightly sclerotized and honey-coloured, as the inflations were not completely successful the whole conjunctiva was not seen but the "lappet" processes are strongly developed, there are two rather tubular conjunctival lobes and the medial penial plates are large and ventrally placed, each has a lateral laminate process. Apex of female Fig. 64 B.

MALES (from 12 specimens)

Dimensions—	Parameter	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	39	4.2	10.7	34-47
Head width	44	1.7	3.8	42-48
Antennal segment I	11	1.5	13.6	9-15
Antennal segment II	22	2.0	11.0	20-26
Antennal segment III	20	1.5	7.5	18-23
Antennal segment IV	24	1.7	7.0	22-29
Antennal segment V	27	1.1	4.0	25-28
Pronotum width	107	5.1	4.7	95-112
Pronotum length	47	2.7	5.7	43-50
Total length	206	8.9	4.3	195-225

FEMALES (from 7 specimens)

Parameter	Mean	Standard Deviation	Coefficient of Variation	Observed Range
Head length	41	3.8	9.2	35-46
Head width	47	2.1	4.4	44-50
Antennal segment I	11	2.6	23.6	9-17
Antennal segment II	23	1.7	7.3	21-25
Antennal segment III	19	1.2	6.3	17-21
Antennal segment IV	24	(five measurements only)		23-25
Antennal segment V	26	(three measurements only)		25-27
Pronotum width	121	8.7	7.1	107-131
Pronotum length	53	3.7	6.9	48-59
Total length	233	21.2	9.0	210-275

Total length: 10.3-14.5 mm

Remarks: A not very common species but widely distributed, ranging from near Geraldton in Western Australia to Yeppoon in Queensland. Most specimens examined were from arid regions.

In Helsinki an unmarked male specimen was located which agrees in locality and all essential

details of Bergroth's original description of this species. The specimen has been marked as the lectotype.

Location of Type:

Lectotype ♂, "Stevenson River, N.T." in Helsinki.

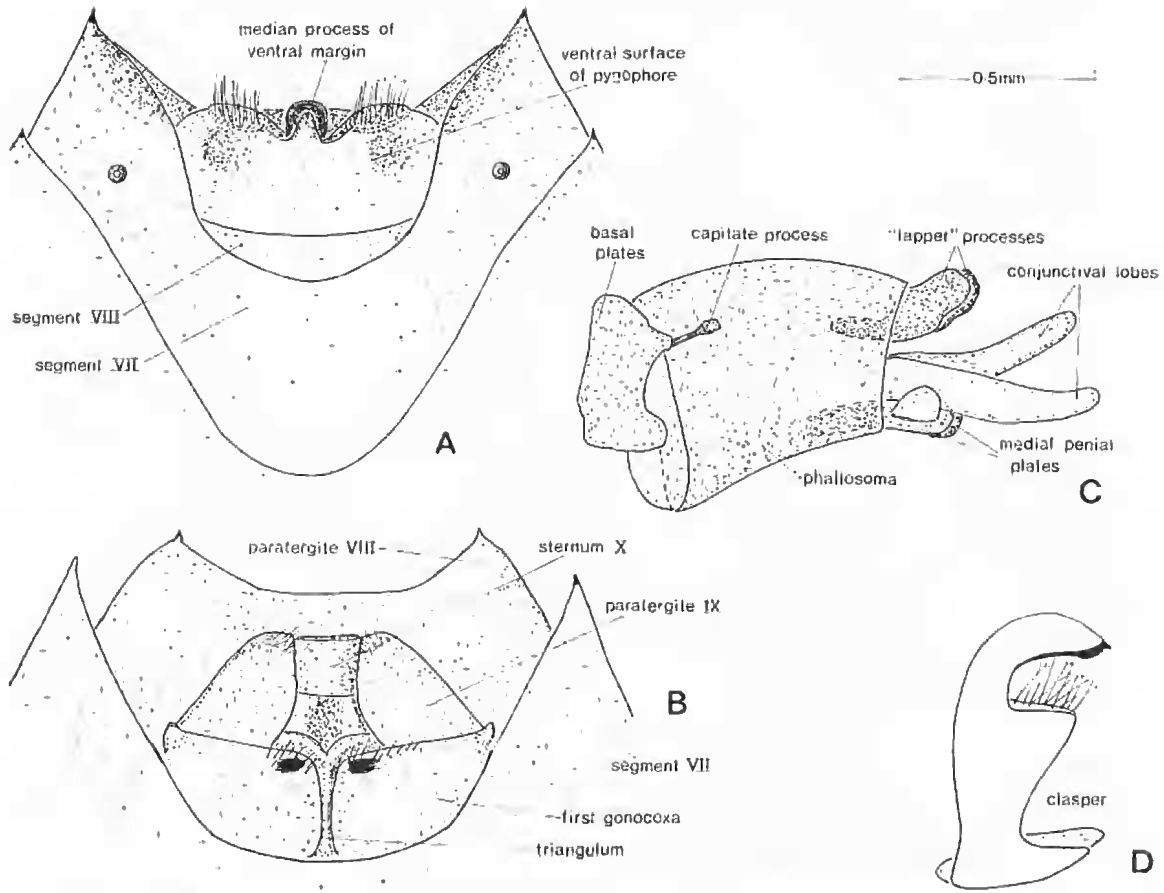


Fig. 64. *Petalaspis tesorum* Bergroth. A, ventral aspect of apex of male abdomen. B, ventral aspect of apex of female abdomen. C, lefthand side view of aedeagus. D, clasper.

Specimens examined: The lectotype and one other unlocalised specimen ♀, Australia, Blackburn SAM. Western Australia 3 ♂♂, 1 ♀, Dongarra, 26.XI-3.XII.1935, R. E. Turner; ♂, Dongarra, 4-10.X.1935, R. E. Turner BM; 2 ♀♀, 24 km (= 15 miles) west of Louisa Downs, 250 m, 18.X.1962, at Ultraviolet (black) light, E. S. Ross & D. O. Cavagnaro CAS. South Australia; 4 ♂, 2 ♀, Parachilna Gorge 11 km east of Parachilna, 20.V.1975, by beating foliage of *Eucalyptus camaldulensis* Dehn., G. F. Gross; ♂, Lake Eyre, May 1951, G. F. Gross; ♀, Cooper Crossing, 21.II.1956, G. F. Gross SAM. Victoria 1 ♀, Lake Hattah, J. E. Dixon NM. New South Wales ♂, Bourke, 25.V.1905, ex Kirkaldy Coll. USNM. Queensland ♀, Bowen, A. Simpson BM; 2 ♂♂, Mt. Isa, 3.XI.1967, on *Eucalyptus* sp., E. M. Exley; 2 ♂♂, 2 ♀♀, Lake Moondarra 19 km (= 12 mi) from Mt. Isa, 3.XI.1967, on *Eucalyptus* sp. E. M. Exley UQ; 1 ♀, Rockhampton, Sept. 1943, Helfer, ex J. R. De la Torre Bueno Collection KU; 2 ♂♂, 1 ♀, Yeppoon, 25.XI.1967, J. M. Sedlacek Bishop.

SUMMARY

The history of the recognition that the genera of Pentatomidac related to *Rhynchocoris* Westwood form a distinctive grouping within the family is discussed and the distinctive features of the grouping given. The external morphology and the structure of the male and female external genitalia and the spermatheca of the female are considered in this context. A partial key to the genera in Australia and adjacent regions of the group is given which distinguishes the genera treated in this first part but avoids mentioning new genera to be erected in a subsequent paper on the second half of the group.

This paper considers five genera, three of them known viz. *Ocirrhoe* Stål, *Cuspicona* Dallas and *Petalaspis* Bergroth and two new genera, *Everardia* and *Parocirrhoe*. A description of each genus is given, and where there is more than one included species, a key to the species.

Ocirrhoe is considered to contain 11 species of which five (*wilsoni*, *westwoodi*, *dallasi*, *cavendishii* and *coronata*) are new. *Cuspicona prasinata* Stål is transferred to the genus and the three names which follow are shown to be previously unrecognised junior synonyms of earlier names: *Rhaphigaster viridipes* Walker (of *australis* (Westwood)), *Cuspicona unnotata* Walker (of *australis* (Westwood)), and *Rhynchocoris roei* Westwood (of *unimaculata* (Westwood)). The citations which follow are shown not to apply to the species to which they allegedly pertained: *Cuspicona roei* Dallas non Westwood (now to *dallasi* sp. nov.), and *Ocirrhoe unimaculata* Stål non Westwood (now to *westwoodi* sp. nov.).

Cuspicona is considered to contain 24 species in this region, of which 15 (*ooldeae*, *eremophilae*, *cooperi*, *obesula*, *procallosa*, *equisignata*, *phi*, *angustizona*, *apothoracica*, *longispina*, *cygniterrae*, *norfolcensis*, *neocaledoniae*, *cheesmani* and *exnigraspersa*) are new. *Cuspicona privata* Walker is returned to the genus and is the first valid name for the taxon previously known as *Pentatoma viride* Montrouzier, then *Cuspicona viridis* auctt., then *Cuspicona zeloma* Kirkaldy. The two names which follow are shown to be previously unrecognised junior synonyms of earlier names: *Cuspicona beutenmulleri* Van Duzee (of *strenuella* Walker) and *Cuspicona laminata* Stål (of *privata* Walker). The citations which follow are shown not to apply to the species to which they allegedly pertained: *Cuspicona virescens* Tryon non Westwood (now to *simplex* Walker) and *Cuspicona rufispina* Van Duzee non Stål (now to *forticornis* Breddin).

Everardia is based on a single new species (*picta*) and *Parocirrhoe* is also based on a single new species (*woodwardi*). A lectotype has been selected for *tescorum* Bergroth, the type and only included species in the genus *Petalaspts*.

Descriptions and figures of all new species and redescriptions and figures of previously recognised species from the area are given. Short comparative descriptions are given of *Cuspicona ampla* Walker and *Cuspicona rufispina* Stål which are shown to occur only outside of the area under consideration.

ACKNOWLEDGEMENTS

Funds which assisted a visit overseas in 1969 to study type material and identified and unidentified series of Australian Heteroptera were made available from the Mark Mitchell Research Foundation, the C.S.I.R.O. Science and Industry Endowment Fund and the Board of the South Australian Museum.

I am indebted to the Directors and entomological staff of the institutions listed on p. 53 for permitting me to examine their collections and to make notes on type material and for the loan subsequently of both critical and unsorted material.

Special thanks are due to the following: Dr. E. Tortonese, Genoa; Dr. Z. Kaszab and Dr. A. Soós, Hungary; Dr. U. Göllner-Scheidig and her family, Berlin; Dr. W. Hackman, Mr. M. Meinander, and their colleagues, Helsinki; Professor and Mrs. L. Brundin and Dr. P. I. Persson, Stockholm; Dr. Børge Petersen and Mr. N. Møller Andersen, Copenhagen; Dr. P. van Doesburg and Dr. H. C. Blöte, Leiden; the staff of the Institut Royal des Sciences Naturelles de Belgique, Brussels; Dr. G. Schmitz and the late Dr. H. Schouteden, Terveuren; Dr. A. Villiers, Paris; Dr. W. J. Knight, Mrs. J. M. Black and Mr. L. Mound, British Museum (Natural History); Mr. J. A. Grant, London; Professor Varley and Mr. I. Lansbury, Hope Collection; Dr. and Mrs. P. J. Darlington, Harvard; Professor J. A. Slater, his family, and colleagues, Storrs, Connecticut; Dr. J. A. Rozen, American Museum of Natural History; Dr. R. Froeschner and Dr. J. Herring, United States National Museum; Dr. H. Dybas, Field Museum; Dr. P. Ashlock and his family, Lawrence, Kansas; Professor G. G. E. Scudder and his family, Vancouver; Dr. E. Ross and Dr. P. Arnaud, California Academy of Sciences the late Miss S. Nakata, Bishop Museum.

The biometric analyses were done on a "Programma 101" minicomputer very kindly made available by the Department of Human Physiology and Pharmacology at the University of Adelaide.

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